



## SEQUENCE LISTING

<1> Luparello, James R  
Koel, Cornelius F  
Takashima, Hiroshi

<120> Defects in Periaxin Associated with Myelinopathies

<130> P02086US1/10026309

<140> US 10/021,955

<141> 2001-12-13

<150> US 60/255,217

<151> 2000-12-13

<160> 93

<170> PatentIn version 3.1

<210> 1

<211> 5502

<212> DNA

<213> human

<400> 1

gctctcgagg tgtctggagg ctcagcgagc gccggaccca ggaggcccaa ggagctggag 60  
gtgaccctca ggcagcaaga accccacgga agggcgtgag ccctgcagac agctgtgagg 120  
cacctegggc tgggctcctg ttaggaggaa gtgcctgcac ccaggcagcg gctcagaggc 180  
agctgctcca tgcagaactg aagctggttc tgcagcagaa aggggagagg acacaggagc 240  
ctgggggtgca ggtgcctccc agcaacgcca tggaggccag gagccggagt gccgaggagc 300  
tgaggcgggc ggagttggtg gaaattatcg tggagacgga ggcgagacc ggggtcagcg 360  
gcatcaacgt agcggggcgc ggcaaagagg gaatcttcgt tcgggagctg cgcgaggact 420  
caccgcgcgc caggagcctc agcctgcagg aaggggacca gctgctgagt gccgagtggt 480  
tcttcgagaa cttcaagtac gaggacgcac tacgcctgct gcaatgcgcc gagccttaca 540  
aagtctcctt ctgcctgaag cgcactgtgc ccaccgggga cctggctctg cggcccggga 600  
ccgtgtcttg ctacgagatc aaggggccgc gggccaaggt ggccaagctg gtacgcgtgc 660  
ttagcccggc cccggccctg gactgcccc gcgatccggt ctctgcgccg tgagcccat 720  
tccccgccat cgtgggcccag ccttgccctc tgtcttgtca ctaaccaag ctaattccac 780  
cctctgcccc ttctctctg ccccaaactc ttccccggga agggggacag acccaccca 840  
gccagggcc ctcaccacc tcggagaggc gtccccacca tcggatccag gcttgctagg 900  
ggtcctgaac caggctactt cgaaccagga aagccagatt ccagcctgag tgctggccca 960  
25167341.1

# SEQUENCE LISTING

<110> Lupski, James R  
Boerkoel, Cornelius F  
Takashima, Hiroshi

<120> Defects in Periaxin Associated with Myelinopathies

<130> P02086US1/10026309

<140> US 10/021,955

<141> 2001-12-13

<150> US 60/255,217

<151> 2000-12-13

<160> 93

<170> PatentIn version 3.1

<210> 1

<211> 5502

<212> DNA

<213> human

<400> 1

```

gctctcgagg tgtctggagg ctcagcgagc gccggaccca ggaggcccaa ggagctggag      60
gtgaccctca ggcagcaaga accccacgga agggcgtgag ccctgcagac agctgtgcgg      120
cacctcgggc tgggctcctg ttaggaggaa gtgcctgcac ccaggcagcg gctcagaggc      180
agctgctcca tgcagaactg aagctgggtc tgcagcagaa aggggagagg acacaggagc      240
ctgggggtgca ggtgcctccc agcaacgcca tggaggccag gagccggagt gccgaggagc      300
tgaggcgggc ggagttggtg gaaattatcg tggagacgga ggcgagacc ggggtcagcg      360
gcatcaacgt agcgggcggc ggcaaagagg gaatcttcgt tcgggagctg cgcgaggact      420
caccgcccgc caggagcctc agcctgcagg aaggggacca gctgctgagt gcccagagtgt      480
tcttcgagaa cttcaagtac gaggacgcac tacgcctgct gcaatgcgcc gaggccttaca      540
aagtctcctt ctgcctgaag cgcaactgtgc ccaccgggga cctggctctg cggcccgga      600
ccgtgtcttg ctacgagatc aagggccccg gggccaaggt ggccaagctg gtacgcgtgc      660
ttagcccggc cccggccctg gactgccccg gcgatccggt ctctgcgccg tgagcccat      720
tccccgcat cgtgggccag ccttgccctc tgtcttgtca ctaaccaag ctaattccac      780
cctctgcccc ttcctctctg ccccaaactc tccccggga agggggacag acccaccaca      840
gccagggcc ctcaccacc tcggagaggc gtccccacca tcggatccag gcttgctagg      900
ggtcctgaac caggctactt cgaaccagga aagccagatt ccagcctgag tgctggccca      960
attactgctg agtggccctg gacaaagttg tttctctccc tgggcctcag tttcccatc     1020
tctagaatga ggatgttggg gaaaatcccg gatcaggatc tagaagtctt gggtccccgt     1080

```

ccctacactc	ctgttgactc	atttgagat	cctagatggc	tgctgcttt	cctgggcact	1140
catggtgaaa	tgacaggcaa	gaagtgggga	tgatgttttg	ggaacaagat	acttgaccca	1200
gcacatcccc	cgcttggtcc	aataccaggt	ggggtctctc	ctgtccactc	ccagcctccc	1260
actgtcccac	cgctcctgc	ctctctcctc	tctccccaga	acatccagag	tctgtcccct	1320
gtgaagaaga	agaagatggt	gcctgggggt	ctgggggtcc	ccgctgacct	ggccccgtt	1380
gacgtcgagt	tctcctttcc	caagttctcc	cgctgcgtc	ggggcctcaa	agccgaggct	1440
gtcaagggtc	ctgtcccggc	tgccccctgcc	cgccggcgcc	tccagctgcc	tcggctgcgt	1500
gtacgagaag	tggccgaaga	ggctcaggca	gcccggctgg	ccgccgccgc	tcctcccccc	1560
aggaaagcca	aggtggaggc	tgaggtggct	gcaggagctc	gtttcacagc	ccctcagggtg	1620
gagctggttg	ggccgcggct	gccaggggcg	gaggtgggtg	ttccccaggt	ctcagcccc	1680
aaggctgccc	cctcagcaga	ggcagctggt	ggctttgccc	tccacctgcc	aacccttggg	1740
ctcggagccc	cggtctcgcc	tgctgtggag	gccccagccg	tgggaatcca	ggtccccag	1800
gtggagctgc	ctgccttgcc	ctcactgccc	actctgcca	cacttcctg	cctagagacc	1860
cggaagggg	ctgtgtcgg	agtgggtgcc	accctggatg	tggcagcacc	gactgtggg	1920
gtggacctg	ccttgccggg	tgacagagtg	gaggccggg	gagaggcacc	tgaggtggcc	1980
ctgaagatgc	ccgccttag	ttttccccga	tttggggtc	gagcaaagga	agttgtgag	2040
gccaaggtag	ccaaggtcag	ccctgaggcc	agggtgaaag	gtcccagact	tcgaatgccc	2100
acctttgggc	tttccctctt	ggagccccgg	cccgtgctc	ctgaagttgt	agagagcaag	2160
ctgaagctgc	ccaccatcaa	gatgccctcc	cttggcatcg	gagtgtcagg	gcccgaggtc	2220
aagggtgcca	agggacctga	agtgaagctc	cccaaggctc	ctgagggtcaa	gcttcacaaa	2280
gtgcccagag	cagcccttcc	agaggttcga	ctcccagagg	tggagctccc	caaggtgtca	2340
gagatgaaac	tcccaaaggt	gccagagatg	gctgtgccgg	aggtgcggct	tccagaggta	2400
gagctgcca	aagtgtcaga	gatgaaactc	ccaaagggtc	cagagatggc	tgtgccggag	2460
gtgcggttc	cagaggtaca	gctgctgaaa	gtgtcggaga	tgaaactccc	aaagggtgcca	2520
gagatggctg	tgccggagg	gcggttcca	gaggtacagc	tgccgaaagt	gtcagagatg	2580
aaactcccag	aggtgtcaga	ggtggctgtg	ccagagggtc	ggcttcacaga	ggtgcagctg	2640
ccgaaagtgc	cagagatgaa	agtccctgag	atgaagcttc	caaagggtgc	tgagatgaaa	2700
cttcctgaga	tgaaactccc	tgaagtgcaa	ctcccgaagg	tgcccagat	ggcgtgccc	2760
gatgtgcacc	tcccagaagt	gcagcttcca	aaagtcccag	agatgaagct	ccctgagatg	2820
aaactccctg	aggtgaaact	cccgaagggtg	cccagatgg	ctgtgcccga	tgtgcacctc	2880

ccggaagtgc agctcccgaa agtcccagag atgaaactcc ctaaaatgcc tgagatggct	2940
gtgccagagg ttcgactccc cgaggtgcag ctgccaaaag tctcagagat gaaactcccc	3000
aaggtgcctg aaatggccgt gcccgatgtg cacctcccag aggtgcagct gcccaaagtc	3060
tgtgaaatga aagtccctga catgaagctc ccagagataa aactcccaa ggtgcctgag	3120
atggctgtgc ccgatgtgca cctccccgag gtgcagctgc cgaaagtgtc agagattcgg	3180
ctgccgaaa tgcaagtgcc gaaggttccc gacgtgcac ttccgaaggc accagaggtg	3240
aagctgcca gggctccgga ggtgcagcta aaggccacca aggcagaaca ggcagaaggg	3300
atggaatttg gcttcaagat gcccaagatg accatgcca agctagggag ggcagagtcc	3360
ccatcacgtg gcaagccagg cgaggcgggt gctgaggtct cagggaagct ggtaacactt	3420
ccctgtctgc agccagaggt ggatggtgag gctcatgtgg gtgtcccctc tctcactctg	3480
ccttcagtgg agctagacct gccaggagca cttggcctgc aggggcaggc cccagccgct	3540
aaaatgggca agggagagcg ggtggagggc cctgaggtgg cagcaggggt cagggaagtg	3600
ggcttccgag tgccctctgt tgaaattgtc accccacagc tgcccgccgt ggaaattgag	3660
gaagggcggc tggagatgat agagacaaaa gtcaagccct cttccaagtt ctcttacct	3720
aagtttgac tctcggggcc aaaggtggct aaggcagagg ctgagggggc tgggcgagct	3780
accaagctga aggtatccaa atttgccac tcaactccca aggtcgggt gggggctgag	3840
gctgaggcca aaggggctgg ggaggcaggc ctgctgcctg ccctcgatct gtccatccca	3900
cagctcagcc tggatgcca cctgccctca ggcaaggtag aggtggcagg ggccgacctc	3960
aagttcaagg ggcccagggt tgctctcccc aagtttggg tcagaggccg ggacactgag	4020
gcagcagaac tagtgccagg ggtggctgag ttggagggca agggctgggg ctgggatggg	4080
agggatgaaga tgcccaagct gaagatgcct tcctttgggc tggctcgagg gaaggaagca	4140
gaagttcaag gtgatcgtgc cagcccgggg gaaaaggctg agtccaccgc tgtgcagctt	4200
aagatccccg aggtggagct ggtcacgctg ggcgcccagg aggaaggag ggcagagggg	4260
gctgtggccg tcagtggaat gcagctgtca ggcctgaagg tgtccacagc caggcaggtg	4320
gtcactgagg gccatgacgc ggggctgagg atgcctccgc tgggcatctc cctgccacag	4380
gtggagctga ccggcttttg ggaggcaggc accccagggc agcaggctca gactacagtc	4440
ccttcagcag agggcacagc aggtacagg gttcagggtgc cccagggtgac cctgtctctg	4500
cctggagccc aggttgacag tggtagctg ctggtgggtg aggggtgtct taagatgcc	4560
accgtgacag tgccccagct tgagctggac gtggggctaa gccgagaggc acaggcgggc	4620
gaggcgcca caggcgaggg tgggctgagg ctgaagttgc ccacactggg ggccagagct	4680
aggggtgggg gcgagggtgc tgaggagcag ccccagggg ccgagcgta cttctgcctc	4740



tcactgccccg acgtggagct ctgcgcacatcc gggggcaacc atgccgagta ccaggtggca 4800  
 gagggggagg gagaggccgg acacaagctc aaggtacggc tgccccggtt tggcctggtg 4860  
 cggggccaagg agggggccga ggaggggtgag aaggccaaga gccccaaact caggctgccc 4920  
 cgagtgggct tcagccaaag tgagatggtc actggggaag ggtccccag ccccgaggag 4980  
 gaggaggagg aggaggaaga gggcagtggg gaaggggcct cgggtcgccg gggccgggtc 5040  
 cgggtccgct tgccacgtgt aggcctggcg gcccttcta aagcctctcg ggggcaggag 5100  
 ggcgatgcag cccccaagtc ccccgtcaga gagaagtcac ccaagttccg cttccccagg 5160  
 gtgtccctaa gcccgaaggc cgggagtggg agtggggacc aggaagaggg tggattgcgg 5220  
 gtgcggtcgc ccagcgtggg gttttcagag acaggggctc caggcccggc caggatggag 5280  
 ggggctcagg ctgcggtgt ctgaagcccc tagtcagatg gggatccctt cttgccttcc 5340  
 tttctctacc cctcgtgt tgtgtgtgtg ataactagca ctaaccctaa gagggccggg 5400  
 aggtgggtga ctgaccaggg ctggcaggga ggcctgctcc tgtctctctg gcaggagtgc 5460  
 ctgtaccca ccaagccatg tgaataaaat aatctggaag ta 5502

<210> 2  
 <211> 147  
 <212> PRT  
 <213> human

<400> 2

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
 1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Ile  
 20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
 35 40 45

Glu Asp Ser Pro Ala Ala Arg Ser Leu Ser Leu Gln Glu Gly Asp Gln  
 50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
 65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
 85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
 100 105 110

Ser Gly Tyr Glu Ile Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Val  
115 120 125

Arg Val Leu Ser Pro Ala Pro Ala Leu Asp Cys Pro Ser Asp Pro Val  
130 135 140

Ser Ala Pro  
145

<210> 3  
<211> 19  
<212> DNA  
<213> Human

<400> 3  
gtaagcatgg cctccacct 19

<210> 4  
<211> 20  
<212> DNA  
<213> HUMAN

<400> 4  
ctccttgctg ccctagtctg 20

<210> 5  
<211> 18  
<212> DNA  
<213> HUMAN

<400> 5  
acctgttgag cgccaatg 18

<210> 6  
<211> 20  
<212> DNA  
<213> Human

<400> 6  
cccaaggcag attcctaacc 20

<210> 7  
<211> 20  
<212> DNA  
<213> HUMAN

<400> 7  
cgtgcaagtg ggcagaacta 20

<210> 8  
<211> 20

<212>	DNA	
<213>	HUMAN	
<400>	8	
tgacaagaca	gagggcaagg	20
<210>	9	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	9	
aataccaggt	ggggctcttc	20
<210>	10	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	10	
ctctaggcag	ggaagtgtgg	20
<210>	11	
<211>	18	
<212>	DNA	
<213>	HUMAN	
<400>	11	
agccgtggga	atccaggt	18
<210>	12	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	12	
tgacactttg	ggcagctcta	20
<210>	13	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	13	
cagaggttcg	actcccagag	20
<210>	14	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	14	
gccatctcag	gcatttttagg	20

<210>	15	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	15	
	ctgaggtgaa actcccgaag	20
<210>	16	
<211>	20	
<212>	DNA	
<213>	Human	
<400>	16	
	gcagagtgag agaggggaca	20
<210>	17	
<211>	20	
<212>	DNA	
<213>	Human	
<400>	17	
	aagctaggga gggcagagtc	20
<210>	18	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	18	
	aacttgggga gagcaaacct	20
<210>	19	
<211>	20	
<212>	DNA	
<213>	Human	
<400>	19	
	cctcaggcaa ggtagagggtg	20
<210>	20	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	20	
	gtcacggtgg gcatcttaaa	20
<210>	21	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	21	
	caggctacag ggttcagggtg	20

<210>	22	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	22	
	ttctctctga cgggggactt	20
<210>	23	
<211>	19	
<212>	DNA	
<213>	HUMAN	
<400>	23	
	gtccgcttgc cacgtgtag	19
<210>	24	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	24	
	gtacaggcac tcctgccaga	20
<210>	25	
<211>	21	
<212>	DNA	
<213>	HUMAN	
<400>	25	
	ccgagcctta caaagtctcc t	21
<210>	26	
<211>	20	
<212>	DNA	
<213>	HUMAN	
<400>	26	
	agtttggggc agagaggaag	20
<210>	27	
<211>	384	
<212>	DNA	
<213>	Human	
<400>	27	
	tacttccaga ttattttatt cacatggctt ggtggggtag aggcactcct gccagagaga	60
	caggagcagg cctccctgcc agccctggtc agtcacccac ctcccggccc tcttagggtt	120
	agtgctagtt atcacacaca caacagcgag ggggtagaga aaggaaggca agaagggatc	180
	cccatctgac taggggcttc agacagccgc agcctgagcc ccctccatcc tggccggggc	240

tggagcccct gtctctgaaa accccacgct gggcagccgc acccgcaatc caccctcttt	300
ctgggtcccca ctcccactcc gggccttggg ggctaaggac acccctggga agccggaact	360
tggtgacttc tttcttgagg ggga	384

<210> 28  
 <211> 402  
 <212> DNA  
 <213> Human

<220>  
 <221> misc\_feature  
 <222> (1)..(402)  
 <223> n equals unknown

<400> 28	
tacttccaga ttattttatt cacatggctt ggtggggtag aggcactcct gccagagaga	60
caggagcagg cctccctgcc agccctgggc agtcacccac ctcccgcccc tcttaggggt	120
agtgctagtt atcacacaca caacagcgag ggggtagaga aaggaaggca agaagggatc	180
cccatctgac taggggcttc agacagccgc agcctgagcc ccctccatcc tggccggggc	240
tggagcccct gtctctgaaa accccacgct gggcagccgc acccgcaatc caccctcttc	300
ctgggtcccca ctcccactcc gggccttggg gcttatggac accctgngga agcgggaactt	360
gggtgacttc tctcttaccg gggacttttg ggcttgattt cc	402

<210> 29  
 <211> 5432  
 <212> DNA  
 <213> Mouse

<400> 29	
cagacagacc aaggagctct ggaggtgtct ggaggccac cgagccccag acccaggagg	60
cccaggaagc tggaagtgc cctcaggcag caagacctca aaggaagagt gagattcctg	120
cttacagctg tgcattcccc cgagtggggc tcctgtcagg agaaaaggcc atcactcaag	180
aagcggctca gcggcagctg ctccatgagg agctgaagggt ggtcctgcag cagaaggagg	240
agaggacacg ggagctcgag ccccagggtga ctctctgcag agctatggag gccaggagcc	300
gcagcgctga ggagctgaga cgggcggagt tggtaggat tatcgtggag accgaggcac	360
agaccggggt cagcggcttc aacgtagcag gcggcggcaa agaaggaatc tttgtccgtg	420
agctgcgaga ggactcaccg gcagctaaga gcctcagctt gcaagaaggg gaccagctgc	480
tgagtgcccg tgtgttcttt gagaacttca aatatgagga tgacttcgc ctgctgcaat	540
gcgcagagcc ctacaaggte tccttctgct tgaagcgac tgtgccacc ggggatctgg	600
cactgaggcc cgggacggtg tctggatacg agatgaaggg cccacgggcc aaagtggcca	660

agctggtacg	cgtgcttagc	cgggtcccgg	tccaggacag	ccccagtgac	cgggtcgctg	720
ctgcgccgta	aaccctactc	cctttcactg	tggcccactt	tggccctctg	tctgtcacta	780
acccgacact	aattcgccct	ctgccccttg	ttctctgctc	ctaaactcca	ctcctgtcaa	840
agggtgcacc	tattggcagg	tggttctcac	ccatccccac	catgcaaccc	gggctcatta	900
ggggtcatgg	agtccctggaa	ggccagattc	tagcccaatg	gctggtgggt	tactgagtga	960
cccaagtttc	ttttcctctc	tgggtcgcag	tttccccaac	tctacaataa	ggatgttggg	1020
ggaaattcca	gaatttttgg	gttcccattg	ccacatccct	gtcccattgc	cacatcactg	1080
tgagattctg	aatgactgtc	attgccttcc	tgaagtgaca	ggcaggaagg	tggatgtggt	1140
ttgggatata	ctctacccca	aacttctccc	agcctggtat	actaggtggg	ttatTTTTct	1200
atctactccc	agcctcccac	tgtcccacag	cctcctgcct	ctctcctctc	tcctcagaac	1260
atccagagtc	tggcccctgt	gaagaagaag	aagatggtga	ctggggccct	ggggacccct	1320
gcagatttgg	cccctgttga	cgtcgagttc	tcttttccca	agttctcccg	actgcgtcgg	1380
ggtctcaaag	ccgaggctgt	caagggacct	gtcccagctg	cccctgcccg	tcgcgcctc	1440
cagctgcctc	ggctgcgtgt	ccgagaagta	gctgaagagg	cccaggtagc	ccgaatggct	1500
gctgctgctc	ctcccccaag	gaaggccaag	gcagaagctg	aggcagccac	aggagctggg	1560
ttcacagccc	ctcagataga	gctagtgtgg	cctcggctgc	ctagtgccga	ggtgggtgtc	1620
cctcaggtct	cagttcccaa	ggggacccca	tcaacagagg	cagccagcgg	ctttgccctt	1680
cacctgccaa	cccttgggct	aggtgccccca	gctgcaccgg	ctgtggagcc	cccagccacg	1740
ggaatccagg	ttccacaagt	ggaactcccc	accctgcctt	ctctaccac	gcttcccaca	1800
cttccatgcc	tggacaccca	ggaaggagct	gcagtggtaa	aagtccctac	cctggatgtg	1860
gcagctccgt	ctatgggggt	ggacctggct	ttgccgggtg	cagaggtgga	ggcccaggga	1920
gaggttctctg	aagtggccct	caagatgccc	cggctcagtt	tccccgttt	tgggattcgg	1980
gggaaggaag	ccactgaagc	caaagtagtc	aagggcagcc	ctgaggccaa	agcaaagggt	2040
cccagacttc	gaatgcccac	ctttgggctt	tctctcctgg	aaccccggcc	ctctggccct	2100
gaagctgttg	ctgagagcaa	gctgaagcta	cccacctca	agatgccctc	tttcggcatt	2160
ggtgtggctg	ggcctgaagt	caaggcaccc	acggggcccg	aagtaaagct	ccctaagggt	2220
cctgaggtca	aactcccga	agtgcccag	gcagccattc	cagatgtgca	actccctgag	2280
gtacagctgc	ccaaaatgtc	agacatgaaa	cttccaaaga	tccctgagat	ggttgtaccc	2340
gacgttcgtc	ttccggaagt	gcagctgccc	aaagtccctg	agatgaaagt	cccagagatg	2400
aagctcccga	agtggcccga	gatggccgtg	cccgatgtac	accttccaga	tgtacagctc	2460

ccgaaagtcc	cagagatgaa	gctcccgaag	gtgcccgaga	tggccgtgcc	cgatgtacac	2520
cttcagatg	tacagctccc	gaaagttcca	gagatgaagc	taccagagat	gaagctcccg	2580
aaggtgccgg	agatggccgt	gccggatgta	cgactcccgg	aagttcagct	gccc aaagtg	2640
tctgaggtga	agctcccaaa	gatgcctgag	atggccgtgc	ctgatgtcca	cctcccggag	2700
ctacaacttc	ccaaaatgtc	cgaggtgaag	ctcccaaaga	tgcccagat	ggccgtgccc	2760
gatgttcgcc	tcccgggaagt	tcagctgccc	aaagtgtcag	agatgaaact	ccctaagatg	2820
ccagagatga	ccatgcccg	cattcgcctc	ccagaagttc	agttgcccaa	agtgcctgac	2880
attaaacttc	ctgaaatgaa	gcttcagaa	ataaaactcc	ccaaagtgcc	tgacatggca	2940
gtgcctgatg	tcccccttc	agagctgcag	ctgcccaaag	tgtcggacat	tccgctgcct	3000
gaaatgcaag	tgtcacaggt	cccagaggtg	cagcttccca	agatgccaga	gatgaagttg	3060
tccaaggttc	ctgaggtaca	gaggaaatct	gcagggg	agcaggcaaa	agggactgaa	3120
tttagtttca	agttgcccaa	gatgaccatg	ccaagttgg	ggaaagtggg	caagcctggg	3180
gaggcaagta	ttgaggttcc	agacaaactc	atgacacttc	cctgtctgca	gccagaggtg	3240
ggcactgagg	catcccatgt	tggtgtccct	tccctctctc	tccctctgt	ggagcttgac	3300
ttgcctgggg	ccctgggcct	ggagggacaa	gtccaagaag	ctgtcccagg	caaagtggag	3360
aagccagagg	gccccaggg	agcagtgggt	gttgagagg	tggtcttcg	tgtgccctct	3420
gtggagattg	tactctctca	gctgccca	gttgaagttg	agaaagagca	gctagagatg	3480
gtggagatga	aagtcaaacc	ctcttccaag	ttctctctgc	ccaaattcgg	actttcaggg	3540
cccaaagctg	tcaagggaga	ggtggagggg	cctgggcgag	ccaccaagct	gaaggtttcc	3600
aagtttacca	tctcacttcc	caaagctcga	gcagggactg	aggccgaagc	gaagggagct	3660
ggggaagccg	ggttgctgcc	agcgtggat	ctgtccatcc	cacagctcag	cctggatgcc	3720
cagctgcct	caggcaaggt	ggaagtagct	gatagcaagc	ctaaatcgtc	cagatttgct	3780
ctgcccag	ttggggtgaa	aggccgggac	tctgaggctg	atgtactgg	ggcaggggag	3840
gctgagcttg	agggaaaggg	ttggggctgg	gatgggaagg	tgaagatgcc	caagctgaaa	3900
atgccatctt	ttgggttg	ccgaggaaag	gaagcagaaa	ctcaggatgg	acgtgtcagc	3960
cccggggaaa	agctggaggc	catagctggg	cagcttaaga	tccctg	ggaattggtc	4020
acaccgggag	ctcaggagac	agagaaggtc	accagtggag	tgaagccgtc	aggcctccag	4080
gtgtccacca	ctgggcaggt	ggttg	ggccaggaga	gtgtgcagag	ggtgtccaca	4140
ctaggtatct	ctttgcccc	ggtggaattg	gccagctttg	gggaggcagg	ccctgagatc	4200
gtagccctt	ctgcagaggg	cacagcaggc	tctaggg	aggtgccaca	ggtgatgctg	4260
gagctacctg	gaaccaggt	ggcaggggg	gatctgttag	tgggtgagg	catcttcaag	4320



atgcccacag	tgacagtgcc	ccagctagag	ctggatgtgg	ggctggggcca	tgaagcccag	4380
gctggtgaag	cagccaagag	tgaggggtggg	ataaagttga	agttgcccac	actgggggacc	4440
ggaagcagag	gagagggcgt	tgagccccag	ggccccgagg	cccagcgcac	cttcacctc	4500
tcattgcccg	atgtggaact	cacgtcacca	gtgagtagcc	acgctgagta	ccaggtagtt	4560
gaggggtgatg	gggatggtgg	gcacaaactc	aagggttcggc	tgcccctggt	tgggtctggca	4620
aaggccaagg	aagggataga	agttggagaa	aaggttaaga	gtccaaagct	caggctaccc	4680
cgagtgggct	tcagccagag	tgagtcggtc	tccggagaag	gctctccaag	tcctgaggag	4740
gaggaagaag	gcagtgggga	aggggcttcc	agtcgccggg	gtagggtaag	ggtccgcctg	4800
cctcgggtag	gcttggcttc	cccttctaaa	gtctctaagg	gacaggaggg	tgatgcaacc	4860
tccaagtccc	cagttgggga	gaagtcaccc	aaattccgtt	ttcctagggt	gtccttaagc	4920
cccaaggccc	ggagtgggag	tagggaccgg	gaagaagggtg	gattcagggt	ccgactgccc	4980
agtgtgggat	tttcagaaac	agcagttcca	ggttccacca	ggattgaggg	aaccaggct	5040
gctgccatct	gaagccccag	gacagctgtg	gattccccct	cttgtcttct	cattccccag	5100
cctagccccc	cattttgtgt	gtgacattac	tagcactaat	cctcagaggg	cttgaagggtg	5160
agtaactgac	tcaggcagga	gccagtggcc	tgtgccacct	cattggccaa	agtgcctgta	5220
tatcatgtca	aactatggga	ataaaataat	tcaaaagttg	tcatgtgtct	tggttctcgt	5280
gggggacaca	aggtctcttt	atgtttcctt	catctggctt	gtgcagtgtt	acctcagctt	5340
gaacttaaaa	tcttcagacc	ttgggggctg	gagaggtggc	ccagaggtta	agagcactgg	5400
ctgctcatgc	agaggctctg	agttcaattc	cc			5432

<210> 30  
 <211> 468  
 <212> DNA  
 <213> Arabidopsis

<400> 30	
tttaagattg	tgggatgggc
ttcaaagtag	ctgggccttc
tcttcgctta	aggagttccg
60	
ggaacttttg	ggaattccgg
caacttgga	agttgaggca
tcgtcggtag	ctctggcttt
120	
ggaatctctg	gaactgcagg
ttttgtaatt	tctggaacct
tgggcagttc	aggttttgga
180	
acttctggaa	tcttcggcag
ttcaggcttt	ggaatctctg
gaaacttagg	agcctcagac
240	
tttggaacct	ctggaaccgt
tggcaattcg	ggctttggaa
cctctggcac	cttcggcaac
300	
tcaggcttct	gaatctccgg
catcttgggc	aactcgggtt
tcttgaatct	ccggcatctt
360	
aggtaactcc	ggcatttttg
gcaactcccg	gcttctggat
ctccggtacc	ttaagagcct
420	
caagcttggg	aactcttggc
aactttggca	actcaaggct
tttggaat	
468	

<210> 31  
 <211> 668  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(668)  
 <223> n equals unknown

<400> 31  
 taacttttga attattttat tcccatagtt tgacatgata tacaggcact ttggccaatg 60  
 aggtggcaca ggccactggc tcctgcctga gtcagttacc caccttcaag ccctctgagg 120  
 attagtgcta gtaatgtcac acacaaaatg gggggctagg ctggggaatg gaaagacaag 180  
 agggggaatc cacagctgtc ctggggcttc agatggcagc agcctggggtt ccctcaattc 240  
 ctggtggaac ctggaactgc tgtttctgaa aatcccacac tgggcagtcg gaccctgaat 300  
 ccaccttctt cccggtccct actcccactc cgggccttgg ggcttaagga caccctagga 360  
 aaacggaatt tgggtgactt ctccccaact ggggacttgg aggttgcac accctcctgt 420  
 ccctagagac tttagaaggg gaagccaagc ctacccgagg caggcggacc cttaccctac 480  
 cccggcgact ggaagccctt tcccactgc cttcttcctc ctctaggac ttggagagcc 540  
 ttctcccgag accgactcac tctggcttga acccactcng ggtagcctga gctttgactc 600  
 ttagcctttt ctcccacttc tatcccttcc ttgccctttg cagaccaaca agggaggcgg 660  
 accttgag 668

<210> 32  
 <211> 433  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(433)  
 <223> n equals unknown

<400> 32  
 cagaaactca gatggacgtg tcagccccgg ggaaaagctg gaggccatag ctgggcagct 60  
 taagatccct gcggtggaat tggtcacacc gggagctcag gagacagaga aggtcaccag 120  
 tggagtgaag ccgtcaggcc tcaggtgtc caccactggg caggtggttg cagagggcca 180  
 ggagagtgtg cagaggggtgt ccacactagg tatctctttg cccaggtgg aattggccag 240  
 ctttggggag gcaggccctg agatcgtagc cccttctgca gagggcacag caggctctag 300

ggtccaggtg ccacaggtga tgctggagct acctggaacc cacgtggcag ggggtgatct 360  
 gttagtgggt gagggcatct tcangatgcc ccccgtagaca gtgcccctcc ttgtgctggc 420  
 tgtggggctg gcc 433

<210> 33  
 <211> 451  
 <212> DNA  
 <213> Human

<400> 33  
 acttccagat tattttattc acatggcttg gtggggtaca ggactcctg ccagagagac 60  
 aggagcaggc ctccctgcc a gccctgggtca gtcaccacc tcccggccct cttagggtta 120  
 gtgctagtta tcacacacac aacagcgagg gggtagagaa aggaaggcaa gaagggatcc 180  
 ccatctgact aggggcttca tacagccgca gcctgagccc cctccatcct ggccgggcct 240  
 ggagcccctg tctctgaaaa cccacgctg ggcagccgca cccgcaatcc accctcttcc 300  
 tgggtcccccac tcccactccg ggcccttgggg cttaggggaca ccctggggaa gcggaacttg 360  
 ggtgacttct ctctgactgg ggacttgggg gctgcatcgc cctcctgccc ccgagaggct 420  
 ttagaagggg ccgccaggcc tacacgtggc a 451

<210> 34  
 <211> 711  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(711)  
 <223> n equals unknown

<400> 34  
 gcacgtgag tacaggtagt gaggggtgatg ggatgggtgg cacaaactca aggttcggct 60  
 gccctgttg gtctgcanaa ggccaagnga gggatagaag tggagaaaag gctaagagtc 120  
 caaagctcag gctaccccga gtgggcttca gccagagtga gtcggtctcc ggagaaggct 180  
 ctccaagtcc tgaggaggag gaagaaggca gtggggaagg ggcttccagt cgccggggta 240  
 gggtaagggt ccgctgcct cgggtaggct tggcttcccc ttctaaagtc tctaaggagc 300  
 aggaggggtga tgcaacctcc aagtccccag ttggggagaa gtcacccaaa ttccgttttc 360  
 ctaggggtgc cttaagcccc aaggcccgga gtgggagtag ggaccgggaa gaagggtgat 420  
 tcagggtccg actgcccagt gtgggatttt cagaaacagc agttccaggt tccaccagga 480  
 ttgaggggaa ccaggctgct gccatctgaa gcccaggac agctgtggat tccccctctt 540  
 gtctttccat tcccagcct agccccccat tttgtgtgtg acattactag cactaatcct 600

cagagggcctt gaaggtgggt aactgactca ggcaggagcc agtggcctgt gccacctcat 660  
 tggccaaagt gcctgtatat catgtcaaac tatgggaata aaataattca a 711

<210> 35  
 <211> 239  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(239)  
 <223> n equals unknown

<400> 35  
 ggattggggg naccaggct cctgccttct gaacccccag gacacctgtg gattccccct 60  
 catgtctttc cattccccac cctaccccc catttttgtgt gtgacattac taccactagt 120  
 cctcagaggg cttgaagggt ggtaactgac tcaggcagga ccagtgccc tgtgccacct 180  
 cattggccta agtgcctgta tttcatgtca aactatggga ataaaataat tctaaagtt 239

<210> 36  
 <211> 290  
 <212> DNA  
 <213> Mouse

<400> 36  
 aacttcccca tgccccactt tccgacatcc agacaccgca gttccacgtt ccaccagcac 60  
 agagggcacc cagggcgccc caatctggag cccaggaca cctctggatt cccctctag 120  
 tctttccatt cccacccta cccccccatt ttgtgtgtga cattactagc actattcctc 180  
 agagggccttg aaggtgggta actgactcag gcaggagcca gtggcctgtc ccacctcatt 240  
 gcccaaagtg cctgtatatc atgtcaaact atgggaataa aataattcaa 290

<210> 37  
 <211> 326  
 <212> DNA  
 <213> Mouse

<400> 37  
 accatacaaa gaataccctc ctggacgaac aagccttcac ggtccccccc cccaatctgc 60  
 gattttcagc cacaccagtt ccagttccac caggattgag ggaaccacc ctgctgcctt 120  
 atggatcccc aggacagttg tggattcccc cttttgtctt tccattcccc agccttcccc 180  
 cccattttgt gtgtgacatt actaccacta atcctcagag ggcttgaagg tgggtaactg 240  
 actcaggcag gaccagtggt cctgtgccac ctcatgggcc aaagtgcctg tatttcatgt 300  
 caaactatgg gaataaaata attcaa 326

<210> 38  
 <211> 633  
 <212> DNA  
 <213> Mouse

<400> 38  
 acgccatggc gagctctggg cgagttgccg tcttgagagct ccatggcgac cccttgctgc 60  
 ccctcgcagg agctgagacg ggcggagttg gtggagatta tcgtggagac cgaggcacag 120  
 accgggggtca gcggcttcaa cgtagcaggc ggcggcaaag aaggaatctt tgtccgtgag 180  
 ctgcgagagg actcaccggc agctaagagc ctcagcttgc aagaagggga ccagctgctg 240  
 agtgcccgtg tgttctttga gaacttcaaa tatgaggatg cacttcgcct gctgcaatgc 300  
 gcagagccct acaaagtctc cttctgcttg aagcgcactg tgcccaccgg ggatctggca 360  
 ctgaggcccc ggacggtgtc tggatacgag atgaagggcc cacgggcaa agtggccaag 420  
 ctgaacatcc agagtctggc ccctgtgaag aagaagaaga tggtgactgg ggccctgagg 480  
 acccctgcag atttggcccc tgttgacgtc gagttctctt tttccaagtt ctcccgactg 540  
 gcgtggggtc ttcaaagccg agctgtcaaa ggacctggtc cagctggccc aaccgctcgc 600  
 ccgcttcagc tgcctcgggt ttgggtccca gaa 633

<210> 39  
 <211> 488  
 <212> DNA  
 <213> Human

<400> 39  
 tttacttcca gattatttta ttcacatggc ttggtggggt acaggcactc ctgccagaga 60  
 gacaggagca ggctccctg ccagccctgg tcagtcaccc acctcccggc cctcttaggg 120  
 ttagtgctag ttatcacaca cacaacagcg agggggtaga gaaaggaagg caagaaggga 180  
 tccccatctg actaggggct tcagacagcc gcagcctgag cccctccat cctggccggg 240  
 cctggagccc ctgtctctga aaaccccaag ctgggcagcc gcacccgcaa tccaccctct 300  
 tcctggtccc cactcccact ccgggccttg gggcttaggg acaccctggg gaagcggaac 360  
 ttgggtgact tctctctgac gggggacatt ggggctgcat cgccctcctg ccccgagag 420  
 gctttagaag gggccgccag gcctacacgt ggcaagcgga cccggaccg gccccggga 480  
 cccgaggc 488

<210> 40  
 <211> 372  
 <212> DNA  
 <213> Human

```

<400> 40
tttactttcca gattattttta ttcacatggc ttggtggggt acaggcactc ctgccagaga      60
gacaggagca ggctccctg ccagccctgg tcagtcaccc acctcccggc cctcttaggg      120
ttagtgctag ttatcacaca cacaacagcg agggggtaga gaaaggaagg caagaaggga      180
tccccatctg actaggggct tcagacagcc gcagcctgag ccccttcat tctgggcccgg      240
ccttgaaccc ctggtttttg aaaacccaac cttggccagc cgaccccgaa atcaaccctt      300
ttcttgggtcc caactccac tccgggcctt ggggcttagg gacaccctgg ggaagcggaa      360
cttgggtgac tt                                                                372

```

```

<210> 41
<211> 642
<212> DNA
<213> Mouse

```

```

<220>
<221> misc_feature
<222> (1)..(642)
<223> n equals unknown

```

```

<400> 41
taacttttga attattttat tcccatagtt tgacatgata tacaggcact ttggccaatg      60
aggggtggcac aggggnccact ggcttcctgc ctgagtcagt taccnnac cttcaagccc      120
tctgagggat tagtgctagt naatgtcaca cacaanaatg gggggctagg nctggggaat      180
ggaaagacaa gagggggaat ccacagctgt cctggggctt cagatggcag cagcctgggt      240
tccctcaatc ctggtggaac ctggaactgc tgtttctgaa aatcccacac tgggcagtcg      300
gaccctgaat ccaccttctt ccccgctccc tacctccact cccggccttg ggggcttaag      360
gacacccta gaaaacggga atttgggtga cttctcccca actggggact tggagggttg      420
atcacctcc tgtcccttag agactttaga aggggaagcc aagcctaccc gaagcaggcg      480
gacccttacc ctacccccgc gactggaagc cccttagcca ctgctcttcc tcctcctagg      540
actggaaagc cctcttcgag accgactacc ttggctgaaa cccactcggg gtagctgagc      600
ttgggatttt tacctttttt tcacttctat cctttcttgt cc                                                                642

```

```

<210> 42
<211> 328
<212> DNA
<213> Mouse

```

```

<400> 42
cccacgcgtc cgggagatga aagtcaaacc ctcttccaag ttctctctgc ccaaattcgg      60
actttcaggg cccaaagctg tcaagggaga ggtggagggg cctgggcgag ccaccaagct      120

```

gaagggtttcc aagtttacca tctcacttcc caaagctcga gcagggactg aggccgaagc 180  
gaagggagct ggggaagccg ggttgctgcc agccctggat ctgtccatcc cacagctcag 240  
cctggatgcc cagctgccct caggcaagggt ggaagtagct gatagcaagc ctaaatcgtc 300  
cagatttgct ctgcccaagt ttgggggt 328

<210> 43  
<211> 564  
<212> DNA  
<213> Mycosphaerella graminicola

<400> 43  
cgctcccggc ttgacaact cccgataccc cgacactctc gaccctaag cttccatctc 60  
tcagcaccac tagcattaag ctgccgccgt tctctgctcc tacactcccg gcttttacga 120  
tccctaact cccgacactc tcgaccccta agcttccatc tctcagcacc actagcatta 180  
agctgccgcc gttctctgct cctacactcc cggcctttac gatccctaac ctcccgatat 240  
tctcgactcc taagcttcca tctcttagca ccaccagcat taagctgccg tcgctctctg 300  
ctccgagcgc tccgtctctg agcaccacta gcatcagggt gtcgtcattc tccgctccaa 360  
gcctcccgaac atttatctcg agcagcgtca acttgccgtc gttctcggct ccaagcctcc 420  
cgggcctccc caggttcacc acgagcagca tcaacttgcc gtcgttctcg gctccaagcc 480  
tcccgggcct cccacgttc accacgaaca gcgtcaactt gccgtcgttc tcgggtccaa 540  
gcctcccggc cctccccacg ttca 564

<210> 44  
<211> 238  
<212> DNA  
<213> Mouse

<220>  
<221> misc\_feature  
<222> (1)..(238)  
<223> n equals unknown

<400> 44  
gaatgaggga acccagactt ntgccttttg aagcccccg acagtcgtgg gttccccttc 60  
tagtctttcc tttcccagc ctagcccccc attttgtgtg tgacattact agcactattc 120  
ctcagagggt ttgaagggtg gtaattgact caggcaggag ccagtggcct gtgccacctc 180  
attggccaaa gtgcctgtat atcatgtcaa actatgggaa tgaaattatt caaaagtt 238

<210> 45  
<211> 654  
<212> DNA  
<213> Mouse

<400> 45  
aaggttaggc tgcccatggt tggctctggca aaggccaagg aagggataga agttggagaa 60  
aaggctaaga gtccaaagct caggctaccc cgagtgaagt tcagccagag tgagtcggtc 120  
tccggagaag gctctccaag tcctgaggag gaggaagaag gcagtgggga aggggcttcc 180  
agtcgccggg gtagggtaag ggtccgcctg cctcgggtag gcttggcttc cccttctaaa 240  
gtctctaagg gacaggaggg tgatgcaacc tccaagtccc cagttgggga gaagtcaccc 300  
aaattccgtt ttcctagggg gtccttaagc cccaaggccc ggagtgggag tagggaccgg 360  
gaagaaggtg gattcagggg ccgactgccc agtgtgggat tttcagaaac agcagttcca 420  
ggttccacca ggattgaggg aaccagggc gctgccattt gaagccccag gacagctgtg 480  
gattccccct cttgtcttcc cattccccag cctggcccc ctttttgtgt gtgacattac 540  
tagcactaat cctcagaggg cttgaaggtg ggtaactgac tcaggcagga gccagtggcc 600  
tgtgccacct cattggccaa agtgccctgta tatcatgtca aactatggga ataa 654

<210> 46  
<211> 585  
<212> DNA  
<213> Zebrafish

<220>  
<221> misc\_feature  
<222> (1)..(585)  
<223> n equals unknown

<400> 46  
ggggggcaga cactgacttc atcactgagg gaataactga ttctgcatga ggaaacactc 60  
attaacgact ctgacagaga ggacaggggg gggaatccag aagccagagt ttcacctata 120  
aacaacaaaa gacggtctcc cccctcagac aagcctccct ttggtcctca tccaagtaca 180  
caccacagca tttccactga cgaacaggac agcccagaac ggattgttca gaaggaaaaa 240  
ctccatgcag aactaaaaca agttttgagt cagaagagaa accagcttag agacacccaa 300  
tccacttcca cagacatgga tgaaccatcc aggacagaca gtaaaaacga ggcggagaag 360  
gatatgcagt tgtccgagct tgtggaagtg gttgttgaga ccgaggctga agttggagcc 420  
agtggttaca gtgtgggttg tggaggggag cgaggcatct tcatcaaaga tgtcttaaaa 480  
gactccccag cagcgaagca cctcagccta cagaaaggta ccaagggact gtattttaca 540  
ttacaaagag caatgtcaaa tacactttan agacttgagc cactg 585

<210> 47  
<211> 232  
<212> DNA



<213> Human

<400> 47

```
cagccgcagc ctgagccccc ttcatacctgg ccgggcctgg agcccctgtc ttgaaaacc      60
ccacgctggg cagccggacc cggaatccac ccttttgctg gtccccactc ccacttcggg      120
ccttgggggt gatggacacc ctgggggaaac ggaacttggg tgaattcttt ttgacagggg      180
acttgtgggc tgcattcact tccttcgccc caaaagcttt aaaagggccca cc              232
```

<210> 48

<211> 418

<212> DNA

<213> Mouse

<400> 48

```
tttaactttt gaattatttt attcccatag ttgacatga tatacaggca ctttggccaa      60
tgaggtggca caggccactg gctcctgcct gagtcagtta cccaccttca agccctctga      120
ggattagtgc tagtaatgtc acacacaaaa tgggggggcta ggctggggaa tggaaagaca      180
agagggggaa tccacagctg tcctggggct tcagatggca gcagcctggg ttccctcaat      240
cctggtggaa cctggaactg ctgtttctga aaatcccaca ctgggcagtc ggaccctgaa      300
tccaccttct tcccggctcc tactcccact ccgggccttg gggcttaagg acaccctagg      360
aaaacggaat ttgggtgact tctccccaac tggggacttg gaggttgcac caccctcc      418
```

<210> 49

<211> 451

<212> DNA

<213> Human

<400> 49

```
acttcagat tattttattc acatggcttg gtggggtaca ggcactcctg ccagagagac      60
aggagcaggc ctccctgcc a gccctgggtca gtcacccacc tcccggccct cttaggggta      120
gtgctagtta tcacacacac aacagcgagg gggtagagaa aggaaggcaa gaagggatcc      180
ccatctgact aggggcttca gacagccgca gcctgagccc cctccatcct ggccgggcct      240
ggagcccctg tctctgaaaa cccacgctg ggcagccgca cccgcaatcc accctcttcc      300
tgggtccccc tccactccg ggccttgggg cttagggaca ccctggggaa gcggaacttg      360
ggtgacttct ctctgacggg ggacttgggg gctgcatcgc cctcctgccc ccgagaggct      420
ttagaagggg ccgccaggcc tacacgtggc a                                  451
```

<210> 50

<211> 498

<212> DNA

<213> Mouse

<400> 50  
aacttttgaa ttatttttatt cccatagttt gacatgatat acaggcactt tggccaatga 60  
ggtggcacag gccactggct cctgcctgag tcagttaccc accttcaagc cctctgagga 120  
ttagtgctag taatgtcaca cacaaaatgg ggggctaggc tggggaatgg aaagacaaga 180  
gggggaatcc acagctgtcc tggggcttca gatggcagca gcctgggttc cctcaatcct 240  
ggtggaacct ggaactgctg tttctgaaaa tcccacactg ggcagtcgga ccctgaatcc 300  
accttcttcc cggtccttac tcccactccg ggccttgggg ctttaaggaca ccctaggaaa 360  
acggaatttg ggtgacttct ccccaactgg agactttgag gttgcatcac cctcctgtcc 420  
cttagagact ttagaagggg aagccaagcc tacccgaggc aggcggaccc ttaccctacc 480  
tcggcgactg gaagcccc 498

<210> 51  
<211> 409  
<212> DNA  
<213> Mouse

<400> 51  
aaacagtcaa ggcaggcaca gctcctctgg cagacgtagg tcctgggtgga aacgggggttc 60  
aggggactcc gcagccttca ccagcatgag ccatccagag gagtcaacag aggtgacact 120  
gaagactgac gtggagtcag gagccagtgg ctacagtgtc acaggtggag gggatcaggg 180  
gatctttgtc aagcaagtac tgaaggactc gtcggctgca aagctgttca acctgagaga 240  
aggagatcaa ctgcttagtg cgaccatatt ctttgaccat atgaaatatg aagatgctct 300  
taaaatcctt cagtactcag aaccatacaa agttcagttc agaatcaaac ggaaactctc 360  
ggccagcaag ggagaggaag gggctgttca gcattcgag caaggccag 409

<210> 52  
<211> 356  
<212> DNA  
<213> Mouse

<400> 52  
tgagcccgca ggttgtgtga ccaagattcg caaagaaaga gagagagaga ccgatacaga 60  
aagagaagaa ggagggggcg gctcctggca aggcgtttgc tcctgagcag agtcctgcaa 120  
agatggagaa ggaggaagag acaacccggg agctgctgct gcccaactgg cagggcagtg 180  
gttcccacgg gctgaccatt gccagaggg atgatggagt ctttgttcag gaggtgatgc 240  
agaactcccc tgcggcccg c actgggggtgg tcaaggaggg ggaccagatt gtgggtgcc 300  
ccatctactt tgacaacctg cagtctggtg aggtgacca gttgctgaat accatg 356

<210> 53

<211> 356  
 <212> DNA  
 <213> Mouse

<400> 53  
 tgagcccgca ggttgtgtga ccaagattcg caaagaaaga gagagagaga ccgatacaga 60  
 aagagaagaa ggagggggcgg gctcctggca aggcgtttgc tcctgagcag agtcctgcaa 120  
 agatggagaa ggaggaagag acaaccggg agctgctgct gccaactgg cagggcagtg 180  
 gttccacagg gctgaccatt gccagaggg atgatggagt ctttgttcag gaggtgatgc 240  
 agaactcccc tgcggcccg actgggggtgg tcaaggaggg ggaccagatt gtgggtgcca 300  
 ccattactt tgacaacctg cagtctgggtg aggtgacca gttgctgaat accatg 356

<210> 54  
 <211> 73  
 <212> DNA  
 <213> Mouse

<400> 54  
 agccaagagt gaggggtggga taaagttgaa gttgccaca ctggggaccg gaagcagagg 60  
 agagggcggt gac 73

<210> 55  
 <211> 342  
 <212> DNA  
 <213> Mouse

<400> 55  
 aagtcacca aattccgttt tcctaggggtg tccttaagcc ccaaggcccg gagtgggagt 60  
 agggaccggg aagaagtgtg gattcagggt ccgactgcc agtgtgggat tttcagaaac 120  
 agcagttcca ggttcacca ggattgaggg aaccagggct gctgcatctg aagccccagg 180  
 acagctgtgg attccccctc ttgtctttcc attccccagc ctagcccca ttttgtgtgt 240  
 gacattacta gcactaatct cagagggctt gaaggtgggt actgactcag gcaggagcag 300  
 tgcgctgtgc cactcattgg ccaaagtgcc tgtatatcat gt 342

<210> 56  
 <211> 390  
 <212> DNA  
 <213> Human

<400> 56  
 ggggctccgg agtgcagcta aaggccacca aggcagaaca ggcagaaggg atggaatttg 60  
 gcttcaagat gcccaagatg accatgcca agctagggag ggcagagtcc ccatcacgtg 120  
 gcaagccagg cgaggcgggt gctgaggtct cagggaaagct ggtaacactt ccctgtctgc 180  
 agccagaggt ggatgggtgag gctcatgtgg gtgtccctct ctactctgc cttcagtgga 240

gctagacctg ccaggagcac ttggcctgca ggggcaggtc ccagccgcta aaatgggcaa	300
gggagagcgg gctgagggcc cgcaggtggc agcaggggtc agggaagtgg gcttccgagt	360
gccctctgtt gaaattgtca cccacagct	390

<210> 57  
 <211> 5432  
 <212> DNA  
 <213> Mouse

<400> 57	
cagacagacc aaggagctct ggaggtgtct ggaggccac cgagccccag acccaggagg	60
cccaggaagc tggaagtgc cctcaggcag caagacctca aaggaagagt gagattcctg	120
cttacagctg tgcatacccc cgagtggggc tcctgtcagg agaaaaggcc atcactcaag	180
aagcggctca gcggcagctg ctccatgagg agctgaaggt ggtcctgcag cagaaggagg	240
agaggacacg ggagctcgag cccaggtga ctctctgcag agctatggag gccaggagcc	300
gcagcgtga ggagctgaga cgggcggagt tggtgagat tatcgtggag accgaggcac	360
agaccggggt cagcggcttc aacgtagcag gcggcggcaa agaaggaatc tttgtccgtg	420
agctgcgaga ggactcaccg gcagctaaga gcctcagctt gcaagaagg gaccagctgc	480
tgagtgcccg tgtgttcttt gagaacttca aatatgagga tgcacttcgc ctgctgcaat	540
gcgcagagcc ctacaaggtc tccttctgct tgaagcgcac tgtgccacc ggggatctgg	600
cactgaggcc cgggacggtg tctggatacg agatgaagg cccacgggcc aaagtggcca	660
agctggtacg cgtgcttagc ccggtcccgg tccaggacag cccagtgac cgggtcgtg	720
ctgcgccgta aaccctactc cctttcactg tggccactt tggccctctg tctgtcacta	780
acccgacact aattcgccct ctgccccttg ttctctgctc ctaaactcca ctctgtcaa	840
agggtgcacc tattggcagg tggttctcac ccatccccc catgcaacc gggctcatta	900
ggggtcatgg agtcctggaa ggccagattc tagcccaatg gctgttgggt tactgagtga	960
cccaagtttc ttttctctc tgggtcgcag tttccccaac tctacaataa ggatgttggg	1020
ggaaattcca gaatttttgg gttcccattg ccacatccct gtcccattgc cacatcactg	1080
tgagattctg aatgactgtc attgccttcc tgaagtgaca ggcaggaagg tggatgtgtt	1140
ttgggatata ctctacccca aacttctccc agcctggtat actaggtggg ttatttttct	1200
atctactccc agcctccac tgtcccacag cctcctgcct ctctcctctc tctcagaac	1260
atccagagtc tggcccctgt gaagaagaag aagatggtga ctggggccct ggggaccct	1320
gcagatttgg cccctgttga cgtcgagttc tcttttccca agttctcccg actgcgtcgg	1380
ggtctcaaag ccgaggctgt caagggacct gtcccagctg cccctgcccg tcgcccctc	1440

cagctgcctc	ggctgcgtgt	ccgagaagta	gctgaagagg	cccaggtagc	ccgaatggct	1500
gctgctgctc	ctcccccaag	gaaggccaag	gcagaagctg	aggcagccac	aggagctggg	1560
ttcacagccc	ctcagataga	gctagtgtgg	cctcggctgc	ctagtgccga	ggtgggtgtc	1620
cctcaggtct	cagttcccaa	ggggacccca	tcaacagagg	cagccagcgg	ctttgccctt	1680
cacctgccaa	cccttgggct	aggtgcccc	gctgcaccgg	ctgtggagcc	cccagccacg	1740
ggaatccagg	ttccacaagt	ggaactcccc	accctgcctt	ctctaccac	gcttcccaca	1800
cttccatgcc	tggacaccca	ggaaggagct	gcagtggtaa	aagtccctac	cctggatgtg	1860
gcagctccgt	ctatgggggt	ggacctggct	ttgccgggtg	cagaggtgga	ggcccaggga	1920
gaggttcctg	aagtggccct	caagatgccc	cggctcagtt	tccccgttt	tgggattcgg	1980
gggaaggaag	ccactgaagc	caaagtagtc	aagggcagcc	ctgaggccaa	agcaaaggg	2040
cccagacttc	gaatgcccac	ctttgggctt	tctctcctgg	aaccccgccc	ctctggccct	2100
gaagctgttg	ctgagagcaa	gctgaagcta	cccaccctca	agatgccctc	tttcggcatt	2160
ggtgtggctg	ggcctgaagt	caaggcaccc	acggggcccg	aagtaaagct	ccctaagggt	2220
cctgaggtca	aactcccga	agtgcccgag	gcagccattc	cagatgtgca	actccctgag	2280
gtacagctgc	ccaaaatgtc	agacatgaaa	cttccaaaga	tccctgagat	ggttgtacct	2340
gacgttcgtc	ttccggaagt	gcagctgccc	aaagtccctg	agatgaaagt	cccagagatg	2400
aagctcccga	agtggcccga	gatggccgtg	cccgatgtac	accttcacga	tgtacagctc	2460
ccgaaagtcc	cagagatgaa	gctcccgaag	gtgcccga	tggccgtgcc	cgatgtacac	2520
cttcagatg	tacagctccc	gaaagttcca	gagatgaagc	taccagagat	gaagctcccg	2580
aaggtgccgg	agatggccgt	gccggatgta	cgactcccgg	aagttcagct	gcccgaagtg	2640
tctgaggtga	agctcccaaa	gatgcctgag	atggccgtgc	ctgatgtcca	cctcccggag	2700
ctacaacttc	ccaaaatgtc	cgaggtgaag	ctcccaaga	tgcccagat	ggccgtgccc	2760
gatgttcgcc	tcccggaagt	tcagctgccc	aaagtgtcag	agatgaaact	ccctaagatg	2820
ccagagatga	ccatgcccg	cattgcctc	ccagaagttc	agttgcccaa	agtgcctgac	2880
attaaacttc	ctgaaatgaa	gcttcacaga	ataaaactcc	ccaaagtgcc	tgacatggca	2940
gtgcctgatg	tcccccttc	agagctgcag	ctgcccgaag	tgtcggacat	tccgctgcct	3000
gaaatgcaag	tgtcacaggt	cccagaggtg	cagcttccca	agatgccaga	gatgaagttg	3060
tccaaggttc	ctgaggtaca	gaggaaatct	gcaggggcgg	agcaggcaaa	agggactgaa	3120
tttagtttca	agttgcccaa	gatgaccatg	cccaagttgg	ggaaagtggg	caagcctggg	3180
gaggcaagta	ttgaggttcc	agacaaactc	atgacacttc	cctgtctgca	gccagaggtg	3240

ggcactgagg	catcccatgt	tggtgtccct	tccctctctc	tcccctctgt	ggagcttgac	3300
ttgcctgggg	ccctgggcct	ggaggggaaa	gtccaagaag	ctgtcccagg	caaagtggag	3360
aagccagagg	gccccagggg	agcagtgggt	gttgagagag	tgggctttcg	tgtgccctct	3420
gtggagattg	tactctctca	gctgcccaca	gttgaagttg	agaaagagca	gctagagatg	3480
gtggagatga	aagtcaaacc	ctcttccaag	ttctctctgc	ccaaattcgg	actttcaggg	3540
cccaaagctg	tcaagggaga	ggtggagggg	cctgggcgag	ccaccaagct	gaaggtttcc	3600
aagtttacca	tctcacttcc	caaagctcga	gcagggactg	aggccgaagc	gaaggagct	3660
ggggaagccg	ggttgctgcc	agcgctggat	ctgtccatcc	cacagctcag	cctggatgcc	3720
cagctgccct	caggcaaggt	ggaagtagct	gatagcaagc	ctaaatcgct	cagatttgct	3780
ctgccaagt	ttggggtgaa	aggccgggac	tctgaggctg	atgtactggg	ggcaggggag	3840
gctgagcttg	agggaaaggg	ttggggctgg	gatgggaagg	tgaagatgcc	caagctgaaa	3900
atgccatctt	ttgggttgct	ccgaggaaaag	gaagcagaaa	ctcaggatgg	acgtgtcagc	3960
cccggggaaa	agctggaggc	catagctggg	cagcttaaga	tccctgcggt	ggaattggct	4020
acaccgggag	ctcaggagac	agagaaggtc	accagtggag	tgaagccgtc	aggcctccag	4080
gtgtccacca	ctgggcaggt	ggttgccagag	ggccaggaga	gtgtgcagag	ggtgtccaca	4140
ctaggtatct	ctttgcccc	ggtggaattg	gccagctttg	gggaggcagg	ccctgagatc	4200
gtagcccctt	ctgcagaggg	cacagcaggc	tctagggctc	aggtgccaca	ggtgatgctg	4260
gagctacctg	gaaccaggt	ggcagggggg	gatctgttag	tgggtgaggg	catcttcaag	4320
atgcccacag	tgacagtgcc	ccagctagag	ctggatgtgg	ggctgggcca	tgaagcccag	4380
gctggtgaag	cagccaagag	tgaggggtgg	ataaagttga	agttgccac	actggggacc	4440
ggaagcagag	gagagggcgt	tgagccccag	ggccccgagg	cccagcgcac	cttcacctc	4500
tcattgcccc	atgtggaact	cacgtcacca	gtgagtagcc	acgtgagta	ccaggtagtt	4560
gaggtgatg	gggatgggtg	gcacaaactc	aaggttcggc	tgcccctggt	tggctctggca	4620
aaggccaagg	aagggataga	agttggagaa	aaggttaaga	gtccaaagct	caggctaccc	4680
cgagtgggct	tcagccagag	tgagtcggtc	tccggagaag	gctctccaag	tcctgaggag	4740
gaggaagaag	gcagtgggga	aggggcttcc	agtcgccggg	gtagggttaag	ggtccgcctg	4800
cctcgggtag	gcttggttcc	cccttctaaa	gtctctaagg	gacaggaggg	tgatgcaacc	4860
tccaagtccc	cagttgggga	gaagtcaccc	aaattccgtt	ttcctagggg	gtccttaagc	4920
cccaaggccc	ggagtgggag	tagggaccgg	gaagaaggtg	gattcagggg	ccgactgccc	4980
agtgtgggat	tttcagaaac	agcagttcca	ggttccacca	ggattgaggg	aaccaggct	5040
gctgccatct	gaagccccag	gacagctgtg	gattccccct	cttgtcttcc	cattccccag	5100

cctagccccc	cattttgtgt	gtgacattac	tagcactaat	cctcagaggg	cttgaaggtg	5160
agtaactgac	tcaggcagga	gccagtggcc	tgtgccacct	cattggccaa	agtgcctgta	5220
tatcatgtca	aactatggga	ataaaataat	tcaaaagttg	tcatgtgtct	tggtttctcgt	5280
gggggacaca	aggtctcttt	atgtttcctt	catctggcct	gtgcagtgtt	acctcagctt	5340
gaacttaaaa	tcttgcagcc	ttgggggctg	gagaggtggc	ccagaggtta	agagcactgg	5400
ctgctcatgc	agaggtcctg	agttcaattc	cc			5432

<210> 58  
 <211> 4840  
 <212> DNA  
 <213> Mouse

<400> 58	
cagacagacc	aaggagctct ggaggtgtct ggaggccac cgagccccag acccaggagg 60
cccaggaagc	tggaagtgac cctcaggcag caagacctca aaggaagagt gagattcctg 120
cttacagctg	tgcattcacc cgagtggggc tcctgtcagg agaaaaggcc atcactcaag 180
aagcggctca	gcggcagctg ctccatgagg agctgaaggt ggtcctgcag cagaaggagg 240
agaggacacg	ggagctcgag ccccagggtga ctctctgcag agctatggag gccaggagcc 300
gcagcgctga	ggagctgaga cgggcggagt tgggtggagat tatcgtggag accgaggcac 360
agaccggggg	cagcggcttc aacgtagcag gcggcggcaa agaaggaatc tttgtccgtg 420
agctgcgaga	ggactcaccg gcagctaaga gcctcagctt gcaagaaggg gaccagctgc 480
tgagtgcctg	tgtgttcttt gagaacttca aatatgagga tgcacttcgc ctgctgcaat 540
gcgcagagcc	ctacaaggtc tccttctgct tgaagcgcac tgtgccacc ggggatctgg 600
cactgaggcc	cgggacgggtg tctggatacg agatgaaggg cccacgggcc aaagtggcca 660
agctgaacat	ccagagtctg gccctgtga agaagaagaa gatggtgact ggggccctgg 720
ggacccctgc	agatttggtg cctgttgacg tcgagttctc ttttccaag ttctcccgac 780
tgcgtcgggg	tctcaaagcc gaggtgtgca agggacctgt cccagctgcc cctgcccgtc 840
gccgcctcca	gctgcctcgg ctgcgtgtcc gagaagtagc tgaagaggcc caggtagccc 900
gaatggctgc	tgctgctcct cccccaagga aggccaaggc agaagctgag gcagccacag 960
gagctgggtt	cacagcccct cagatagagc tagttgggct tcggctgcct agtgccgagg 1020
tgggtgtccc	tcaggtctca gttcccaagg ggaccccatc aacagaggca gccagcggct 1080
ttgcccttca	cctgccaaacc cttgggctag gtgcccagc tgcaccggct gtggagcccc 1140
cagccacggg	aatccaggtt ccacaagtgg aactccccac cctgccctct ctaccacgc 1200
ttccacact	tccatgcctg gacaccagc aaggagctgc agtggtaaaa gtccttcccc 1260

tg gatgtggc agctccgtct atgggggtgg acctggcttt gccgggtgca gaggtggagg	1320
cccagggaga ggttcctgaa gtggccctca agatgccccg gctcagtttc ccccgttttg	1380
ggattcgggg gaaggaagcc actgaagcca aagtagtcaa gggcagccct gaggccaaag	1440
caaaggggtcc cagacttcga atgccacact ttgggctttc tctcctggaa ccccggccct	1500
ctggccctga agctgttgct gagagcaagc tgaagctacc caccctcaag atgccctctt	1560
tcggcattgg tgtggctggg cctgaagtca aggcacccac ggggcccgaa gtaaagctcc	1620
ctaaggttcc tgaggtcaaa ctcccgaaag tgcccgaggc agccattcca gatgtgcaac	1680
tccctgaggt acagctgccc aaaatgtcag acatgaaact tccaaagatc cctgagatgg	1740
ttgtaccga cgttcgtctt ccggaagtgc agctgcccga agtccctgag atgaaagtcc	1800
cagagatgaa gctcccgaa tgccccgaga tggccgtgcc cgatgtacac cttccagatg	1860
tacagctccc gaaagtccca gagatgaagc tcccgaaagt gcccgagatg gccgtgcccg	1920
atgtacacct tccagatgta cagctcccgaa aagttccaga gatgaagcta ccagagatga	1980
agctcccgaa ggtgccggag atggccgtgc cggatgtacg actcccgaa gttcagctgc	2040
ccaaagtgtc tgaggtgaag ctcccaaaga tgccctgagat ggccgtgcct gatgtccacc	2100
tcccgagct acaacttccc aaaatgtccg aggtgaagct cccaaagatg cccgagatgg	2160
ccgtgcccga tgttgcctc ccggaagtgc agctgcccga agtgtcagag atgaaactcc	2220
ctaagatgcc agagatgacc atgcccgaca ttgcctccc agaagttcag ttgcccgaag	2280
tgccctgacat taaacttcct gaaatgaagc ttccagaaat aaaactcccc aaagtgcctg	2340
acatggcagt gcctgatgtc ccccttccag agctgcagct gcccaaagtg tcggacattc	2400
ggctgcctga aatgcaagtg tcacaggtcc cagaggtgca gcttcccaag atgccagaga	2460
tgaagttgtc caaggttcct gaggtacaga ggaaatctgc aggggcggag caggcaaaag	2520
ggactgaatt tagtttcaag ttgcccgaaga tgaccatgcc caagttgggg aaagtgggca	2580
agcctgggga ggcaagtatt gaggttccag acaaactcat gacacttccc tgtctgcagc	2640
cagaggtggg cactgaggca tcccatgttg gtgtcccttc cctctctctc ccctctgttg	2700
agcttgactt gcctggggcc ctgggcctgg agggacaagt ccaagaagct gtcccaggca	2760
aagtggagaa gccagagggc cccagggtag cagtgggtgt tggagaggtg ggctttcgtg	2820
tgccctctgt ggagattgtc actcctcagc tgcccacagt tgaagttgag aaagagcagc	2880
tagagatggt ggagatgaaa gtcaaaccct cttccaagtt ctctctgccc aaattcggac	2940
tttcagggcc caaagctgtc aaggagaggg tggaggggcc tgggcgagcc accaagctga	3000
aggtttccaa gtttaccatc tcaacttccca aagctcgagc agggactgag gccgaagcga	3060



agggagctgg ggaagccggg ttgctgccag cgctggatct gtccatccca cagctcagcc	3120
tggatgccc gctgcctca ggcaagggtg aagtagctga tagcaagcct aaatcgcca	3180
gatttgctct gcccaagttt ggggtgaaag gccgggactc tgaggctgat gtactggtgg	3240
caggggaggc tgagcttgag ggaaaggggt ggggctggga tgggaagggt aagatgccc	3300
agctgaaaat gccatctttt gggttgtccc gaggaaagga agcagaaact caggatggac	3360
gtgtcagccc cggggaaaag ctggaggcca tagctgggca gcttaagatc cctgcggtgg	3420
aattggtcac accgggagct caggagacag agaagggtcac cagtggagtg aagccgtcag	3480
gcctccaggt gtccaccact gggcaggtgg ttgcagaggg ccaggagagt gtgcagaggg	3540
tgtccacact aggtatctct ttgccccagg tggaaattggc cagctttggg gaggcaggcc	3600
ctgagatcgt agccccttct gcagagggca cagcaggctc tagggtccag gtgccacagg	3660
tgatgctgga gctacctgga acccaggtgg caggggggtga tctgttagtg ggtgagggca	3720
tcttcaagat gccacagtg acagtgcccc agctagagct ggatgtgggg ctgggccatg	3780
aagcccaggc tggatgaagca gccaaagagt aggggtgggat aaagttgaag ttgccacac	3840
tggggaccgg aagcagagga gagggcggtt agccccagg cccgaggcc cagcgcacct	3900
tccacctctc attgcccgat gtggaactca cgtcaccagt gagtagccac gctgagtacc	3960
aggtagttga gggatgatgg gatgggtggg acaaactcaa ggttcggctg cccctgtttg	4020
gtctggcaaa ggccaaggaa gggatagaag ttggagaaaa ggttaagagt ccaaagctca	4080
ggctaccccg agtgggcttc agccagagt agtcgggtctc cggagaaggc tctccaagtc	4140
ctgaggagga ggaagaaggc agtggggaag gggcttccag tcgccggggg agggtaaggg	4200
tccgcctgcc tcgggtaggc ttggcttccc cttctaaagt ctctaaggga caggaggggtg	4260
atgcaacctc caagtcccca gttggggaga agtcacccaa attccgtttt cctaggggtgt	4320
ccttaagccc caaggcccg agtgggagta gggaccggga agaagggtga ttcagggtcc	4380
gactgcccag tgtgggattt tcagaaacag cagttccagg ttccaccagg attgaggga	4440
cccaggctgc tgccatctga agccccagga cagctgtgga ttccccctct tgtctttcca	4500
ttccccagcc tagccccca ttttgtgtgt gacattacta gcactaatcc tcagagggt	4560
tgaagggtgag taactgactc aggcaggagc cagtggcctg tgccacctca ttggccaaag	4620
tgctgtata tcatgtcaaa ctatgggaat aaaataattc aaaagttgtc atgtgtcttg	4680
gttctcgtgg gggacacaag gtctctttat gtttccttca tctggcttgt gcagtgttac	4740
ctcagcttga acttaaaatc ttgcagcctt gggggctgga gaggtggccc agaggttaag	4800
agcactggct gctcatgcag aggtcctgag ttcaattccc	4840

<210> 59  
 <211> 491  
 <212> DNA  
 <213> Mouse

<400> 59  
 tgagcccgca ggttgtgtga ccaagattcg caaagaaaga gagagagaga ccgatacaga 60  
 aagagaagaa ggaggggcg gctcctggca aggcgtttgc tcctgagcag agtcctgcaa 120  
 agatggagaa ggaggaagag acaacccggg agctgctgct gcccactgg cagggcagtg 180  
 gttcccacgg gctgaccatt gccagagga gtgatggagt ctttgttcag gaggtgatgc 240  
 agaactcccc tgcggcccg gctgggggtg tcaaggagg ggaccagatt gtgggtgcc 300  
 ccatctactt tgacaacctg cagtctggtg aggtgacca gttgctgaat accatggggc 360  
 atcacactgt tggcttgaag ttgcaccgta aaggggaccg ttcccctgag cctggacaga 420  
 cctggacca tgaagtcttc agttcccgta gctctgaagt ggttctgaac acggtacaac 480  
 cttcatccct g 491

<210> 60  
 <211> 494  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(494)  
 <223> n equals unknown

<400> 60  
 tcaggatgga cgtgtcagcc ccggggaaaa gctggaggcc atagctgggc agcttaagat 60  
 ccctgcggtg gaattggtca caccgggagc tcaggagaca gagaaggta ccagtggagt 120  
 gaagccgtca gctccagggtg tccaccactg ggcagggtgtg tgcagagggc caggagagt 180  
 tgcagaggggt gtccacacta ggtatctctt tgcccaggt ggaattggcc agctttgggg 240  
 aggcaggccc tgagatcgta gccccttctg cagagggcac agcaggctct aggggtccagg 300  
 tgccacagggt gatgctggag ctacctgga cccagggtggc aggggggtgat ctgttagtgg 360  
 gtgagggcat cttcaagatg cangcagtga cagtgcccc gctagagctg agtgtggggc 420  
 tgggcatgaa gcccaggctg gtgaagcagc caagagttag ggtgggataa agttgaagtt 480  
 gccacactg ggga 494

<210> 61  
 <211> 360  
 <212> DNA  
 <213> Mouse

<220>  
 <221> misc\_feature  
 <222> (1)..(360)  
 <223> n equals unknown

<400> 61  
 cttggcttcc ctttctaaag tctctaaggg acaggagggt gatgcaacct ccaaggtccc 60  
 cnagttgggg aggaagtcac ccaaattccg ttttcctagg gtgtccttaa gcccgaaggc 120  
 ccggagtggg agtagggacc gggaagaagg tggattcagg gtccgactgc ccagtgtggg 180  
 attttcagaa acagcagttc caggttccac caggattgag ggaaccaggc tgctgccatc 240  
 tgaagcccca ggacagctgt ggattccccc tcttgtcttt ccattcccca gcctagcccc 300  
 ccattttgtg tgtgacatta ctagcactaa tcctcagagg gcttgaaggt gggtaactga 360

<210> 62  
 <211> 359  
 <212> DNA  
 <213> Mouse

<400> 62  
 aacagtcaag gcaggcacag ctctctggc agacgtaggt cctggtggaa acgggggttca 60  
 ggggactccg cagccttcac cagcatgagc catccagagg agtcaacaga ggtgacactg 120  
 aagactgacg tggagtcagg agccagtggg acagtgtcac aggtggaggg gatcagggga 180  
 tctttgtcaa gcaagtactg aaggactcgt cggtgcaaa gctgttcaac ctgagagaag 240  
 gagatcaact gcttagtgcg accatattct ttgaccatat gaaatatgaa gatgctctta 300  
 aaatccttca gtactcagaa ccatacaaag ttcagttcag aatcaaacgg aaactctcg 359

<210> 63  
 <211> 4641  
 <212> DNA  
 <213> Rat

<400> 63  
 ggaactctgg aggtgtctgg agggccactg agcccagac ccaggaggcc caagtagctg 60  
 gaactgacct tcaggcagca agacctcaaa ggaagagtga aattccggct tacagctgta 120  
 catcaccccg agtggggctc ctgtcaggag aaaagaccat caccaggaa gcggctcagc 180  
 ggcagctgct ccatgaggag ctgaagctgg tcctacagca gaaggaggag aggaaacagg 240  
 agcctgagcc ccaggtgact ctctgcagag ctatggaggc caggagccgc agcgctgagg 300  
 agctgagacg agcggagttg gtggagatta tcgtggagac agaggcgag accgggggtca 360  
 gcggcttcaa tgtagcaggc ggcggcaaag aaggaatctt tgtccgcgag ctgcgagagg 420  
 actcaccggc cgccaagagc ctcaagtttg aggaagggga ccaacttctg agcgcccggtg 480

tggttctttga gaacttcaaa tatgaggatg cactacgcct gctgcaatgt gccgagccct	540
acaaggtctc cttctgcttg aagcgactg tgcccaccgg ggacctggca ctgcggcccg	600
ggacggtgtc tggatacgag atgaagggcc cgcgggccaa ggtggccaag ctgaacatcc	660
agagtctgtc ccctgtgaag aagaagaaga tggtgattgg gaccctgggg acccctgcag	720
at ttggcccc tggtgacgtc gagttctctt ttcccaagtt ctcccgattg cgtcggggcc	780
ttaaagccga tgctgtcaag ggacctgtcc cagctgcccc tgcccacga cgtctccagc	840
tgcctcggct acgtgtccga gaagtagctg aagaggccca ggtagcccga atggctgctg	900
ctgctcctcc ctctaggaag gccaagtcag aggtgaggt agccacaggg gctggattca	960
cagccccctca gatagagcta gttgggcctc ggctgcctag cgagaggtg ggtgtcccta	1020
aggtctcagt tccaagga accccatcaa cagaggcagc cagcggcttt gcccttcacc	1080
tgccaaccct tgggctagga gcccagctg caccggctgt ggagcccca accacaggaa	1140
tccagggtccc gcaagtggaa ctccccaccc tgccctcttt accactctg cccacacttc	1200
cgtgcctaga taccaggaa ggggctgcag tggtaaagt cccaccctg gatgtggcag	1260
ctccgtctgt ggaggtggac ctggctttgc caggtgcaga ggtggaggcc caggagagg	1320
tacctgaagt ggctctcaag atgccccgtc tcagtttccc ccgttttggg gttcgaggga	1380
aggaagctac tgaagccaag gtagtcaagg gcagccctga ggccaaagca aagggtccca	1440
gacttcgaat gccaccttt gggctttctc tcttggaatc ccggccctct gccctgaag	1500
ttgctgctga gagcaagctg aagctacca ccctcaagat gccctcttcc ggcatcagcg	1560
tagctgggcc tgaggtcaag gcacccaaag ggcctgaagt gaagctcccc aaagttcctg	1620
agatcaaact cccgaaagcg ccagaggcag ccattccaga tgtgcaactc cccgaggtag	1680
agctgccccaa aatgtcagac atgaaacttc caaagatccc tgagatggct gtaccgatg	1740
ttcaccttcc ggaagtgaag ctgccccaaag tccccgagat gaaagtccca gaaatgaagc	1800
ttccgaagat cccggagatg gccgtgcctg atgtacacct tccagatata cagctcccga	1860
aagttcccga gatgaagctc ccagacatga agctcccga ggtgcctgag atggccgtgc	1920
ctgatgtaca ccttccagat atacagctcc cgaaagtctc cgagatgaag ctcccagaca	1980
tgaagctccc gaaggtgcct gagatggccg tgctgatgt acgaattccg gaagttcagc	2040
tacccaaagt gtccgaggtg aagctcccga agataccgga catggccgtg cctgatgttc	2100
gcctcccaga gctgcaactg cccaaaatgt ctgaggtgaa gctcccgaag ataccggaca	2160
tggccgtacc tgatgttcgc ctcccagaag ttcagctacc caaagtgtca gagctgaagc	2220
tcccgaaggt gcctgagatg accatgcccg acattcgcct cccggaagtt cagctgccc	2280
aagtgcctga cattaaactt ccagaaataa aactcccaa agtgcctgag atggccgtgc	2340

ctgatgtccc ccttccagaa ctacagctgc ccaaagtgcc acaggtccca gacgtgcatc	2400
ttcccaaagt gccagagatg aagttgcccc aggttcctga ggcacagagg aaatctgcag	2460
gggaggagca ggcagaaaag accgaattta gcttcaagtt gcccaagatg actgtgcccc	2520
agttggggaa agtgaccaag cctggggagg caggtattga gggtccagac aaactcctga	2580
tacttccctg tctgcagcca gaggtgggca ctgaggtggc cctgtttggg gtcccttccc	2640
tctctctccc ttctgtggag cttgacttgc ctggggccct gggcctggag ggacaagtcc	2700
aagaagctgt ctctggcaaa gtggagaagc cagagggccc caggtgggca gtagggactg	2760
gagaggcggg cttccgcgtg ccctctgtgg agattgtcaa tcctcagctg cccacggttg	2820
aagtcaagaa agagcagcta gagatggtgg agatgaaagt caaacccact tccaagttct	2880
ctctgcccac atttggactt tcagggccca aagctgtcaa ggcagaggtg gaggggcctg	2940
ggcgagccac caagctgaag gtatccaagt ttgccatctc gcttcccaga gctcgagcag	3000
ggactgacgc ggacgcgaag ggagctgggg aagcgggggt gctgcctgcc ctcgatctgt	3060
ccatcccaca gctcagcctg gatgctcaac tgccctcagg caaggtggag gtagcagggg	3120
ctgagagcaa gcctaaaggg tccagatttg ctctgcccac gtttggggcg aaaggccggg	3180
actctgaagc cgacgtactg gtggcagggg aggctgagct ggaggggaag ggttggggct	3240
gggacgggaa ggtgaagatg cccaagctga agatgccatc ttttgggctg tcccaggaa	3300
aagaagcaga aattcaggat gggcgtgtca gccaggaga aaagctggaa gccatagctg	3360
ggcagcttaa gatccctgag gtggaactgg tcacaccagg agctcaggag acagagaagg	3420
tcaccagtgg agtgaagcca tcaggcctcc aggtgtccac cactaggcag gtggttgacg	3480
agggccagga gggggcgag aggggtgcct cattaggtat ctctttgccc caggtggaac	3540
tggccagctt tggggaggca ggccctgaga tcgcagcccc atctgcagag ggcacagtag	3600
gctctaggat ccaggtgcca caggtgatgc tggagttgcc gggaaccag gtggcagggg	3660
gtgatctgtt agtgggtgag ggcattctca agatgccac agtgacagtg cccagttag	3720
agctggatgt ggggttgggc catgaagccc aggctggtga aacagccaag agtgaggcg	3780
ggttaaagct gaagttgccc aactggggg caggaggcaa aggagagggt gctgaggccc	3840
agagccccga ggcccagcac acctccaca tctcattgcc tgacgtagaa ctcacatcac	3900
cagtgagtag ccacgctgag taccaggtgg ttgagggcga tgggatggc gggcacaac	3960
tcaaggtgcg gctgcccctg tttggtctgg caagggccaa ggaaggaata gaaactggag	4020
aaaaggttaa aagtccaaag ctcaggctac cccgagtggg cttcagccaa agtgagtcgg	4080
cctctggaga aggctctccc agtcctgagg aggaggaaga aggcagtggg gaaggggctt	4140

```

ccggtcgccg tggtcgggtc agggtecgct tgcctcgtgt aggcttggct tcccctteta 4200
aaggctctaa gggacaggag ggtgatgcgg cctccaagtc ccagttggg gagaagtccc 4260
ccaagttccg ctttcctagg gtgtccttaa gcccgaaggc ccggagtggg agtaaggacc 4320
gggaagaagg tggattcagg gtccgactgc ccagtgtggg attttcagaa acagcagctc 4380
caggctccgc caggattgag gggacccagg ctgctgccat ctgaagccct gggacagctg 4440
tggattcccc ctcttgtctt cccatcccca tccctgctcc ccattttatg tgtgacatta 4500
ctagcactaa tcctcagagg gcttgaagggt gggcagctga ctcaggcagg agcgggtctgt 4560
gccacctcat tggctgacgt gcctgtatat catgccaaagc tctgtgaata aaataattca 4620
aaagttaaaa aaaaaaaaaa a 4641

```

```

<210> 64
<211> 672
<212> DNA
<213> Human

```

```

<220>
<221> misc_feature
<222> (1)..(672)
<223> n equals unknown

```

```

<400> 64
tacttccaga ttatatttatt cacatggctt ggtgggggtac aggcactcct gccagagaga 60
caggagcagg cctccctgcc agccctgggtc agtcaccac ctcccggccc tcttaggggtt 120
agtgctagtt atcacacaca caacagcgag ggggtagaga aaggaaggca agaagggatc 180
cccatctgac taggggcttc agacagccgc agcctgagcc ccctccatcc tggccgggccc 240
tggagcccct gtctctgaaa accccacgct gggcagccgc acccgcaatc caccctcttc 300
ctgggtcccca ctccactcc gggccttggg gcttagggac accctgggga agcggaactt 360
gggtgacttc tctctgacgg gggacttggg ggctgcatcg ccctcctgcc cccgagaggc 420
tttagaaggg gccgccaggc ctacacgtgg caagcggacc cggacccggc cccggcgacc 480
cgaggcccct tcccactgc cctcttctc ctctcctcct nctcctcggg gctggggacc 540
cttcccagtg accatctcac tttggctgaa agccaactccg ggcaaccctg agttggggct 600
cttggccttc taaccttctc ggccccctcc tttggcccgcc accagcccaa accggggcag 660
ccgtaccttg ac 672

```

```

<210> 65
<211> 597
<212> DNA
<213> Mouse

```

```

<400> 65
aacttttgaa ttatttttatt cccatagttt gacatgatat acaggcactt tggccaatga      60
ggtggcacag gccactggct cctgcctgag tcagttaccc accttcaagc cctctgagga      120
ttagtgctag taatgtcaca cacaaaatgg ggggctaggc tggggaatgg aaagacaaga      180
gggggaatcc acagctgtcc tggggcttca gatggcagca gcctgggttc cctcaatcct      240
ggtggaacct ggaactgctg tttctgaaaa tcccacactg ggcagtcgga ccctgaatcc      300
accttcttcc cggtccttac tcccactccg ggccttgggg cttaaggaca ccctaggaaa      360
acggaatttg ggtgacttct ccccaactgg ggacttggag gttgcatcac cctcctgtcc      420
cttaaagact ttagaagggg aagccaagcc taccgaggc aggcggaccc ttaccctacc      480
ccggcgactg gaagcccctt ccccactggc ttcttcctcc ttctcaggac ttggagagcc      540
ttcttcggag accgacttcc tcttgctgaa acccactcgg ggaacctgag cctttga      597

```

```

<210> 66
<211> 697
<212> DNA
<213> Human

```

```

<220>
<221> misc_feature
<222> (1)..(697)
<223> n equals unknown

```

```

<400> 66
tttttttttt ttttttactt ccaaattatt ttattcacat ggcttggggg ggtacaggca      60
cctcctgcc aaaaagacagg agcaggcctc cctgccagcc ctggtcagtc acccacctcc      120
cggccctctt agggtttagtg ctagttatca cacacacaac agcgaggggg tagagaaagg      180
aaggcaagaa gggatcccca tctgactagg ggcttcaaac agccgcagcc tgagccccct      240
ccatcctggc cgggcctgga gccctgtct ctgaaaaccc cacgctgggc aggcgcaccc      300
gcaatccacc cttttcctgg tcccactcc cactccgggc cttggggctt agggacaccc      360
tggggaagcg gaacttgggt gacttctctc tgacggggga cttgggggct gcatcgccct      420
cctgcccccg agaggcttta naaggnggcc gcaggcctac acgtggcaag cggaccgga      480
cccggccccg gcgaccgag gccctttcc cactggccta tttctcctcc tcctccttct      540
cctcnggggc tggggaccct tcccagtgga ccatttcact ttggctgaag ccacttcgg      600
gcaagcctga ttttgggcct tttggcctct tacacatctt tgcccacttc ctgggcccgc      660
acaggcccaa cccgggcaag cgtacctttt acttggtg      697

```

```

<210> 67
<211> 626

```

<212> DNA  
<213> Human

<220>  
<221> misc\_feature  
<222> (1)..(626)  
<223> n equals unknown

<400> 67  
tttttttttt tttttttttt tttggctact tccaaattat tttattcaca tggcttggtg 60  
gggtacaggc actcctgcc aaaaaacagg agcaggcctc cctgccagcc ctggtcagtc 120  
accacactcc cggccctctt agggtttagtg ctagttatca cacacacaac agcgaggggg 180  
tagaaaaagg aaggcaaaaa gggatcccca tctgactagg ggcttcaaac agccgcagcc 240  
tgagccccct ccatacctggc cgggcctgga gcccctgtct ttgaaaacc cactcctgggc 300  
agccgcaccc gcaatccacc cttttcctgg tccccactcc cactccgggc cttggggcctt 360  
aaggacaccc tggggaaacg gaacttgggg gacttctctc tgacggggga cttgggggct 420  
gcatcgccct cctgcccccg agaggcttta aaaggggccg ccaggcctac acgtggcaag 480  
cggacccgga cccggggccg gcgacccgag gccccttccc cactgccctt ttccttctc 540  
tcctttctct cctcgggggc tggggaccct tnccagtgga ccatttcact tttgctgaag 600  
cccactcggg gcaacctgag tttggg 626

<210> 68  
<211> 645  
<212> DNA  
<213> Human

<400> 68  
atggagctgt taggagaggg agcaatactg cagggcaggc gggaatcaca gatggaagca 60  
gcacctggaa tccagacctg tgggcaactct gctgagcttc ccagccaggg gatgggaagg 120  
accagggcag agagggccac aagcccagta aggccttcta taacctggaa gataggcagc 180  
ccaaaagtgc atggaaggca cacaccaatg ccattcccta gtgtttccac aggtgaagga 240  
aaatcgactc tgtggatcct ttacctacac tgtttcggca gcaggaaaag ccctgacttt 300  
tctactctc caagagagcc caaatctcaa ggcattgctaa aggaacaagc gaggaaaatg 360  
agaggacagc gaggaggaag ggaaggagca aagggaacac tcaagacgca gagacctcca 420  
tctaaggacc aagcaccgct ggcacacgga ccgcgtgaga agcaggctcc tgccgatgag 480  
tctttcctgc agaaacctcg gctccctgac ttgggtaagc agcagccgaa ccgcagcctc 540  
agcaccaacg tgagaggtgc cgagccctct ccttccttag ctactgagct gggtcttaag 600  
aagcttggtc ctgctagtag ctgtcaagag cttcccaaaa cataa 645



<210> 69  
 <211> 5450  
 <212> DNA  
 <213> Human

<400> 69  
 gagcggggat gatgaggagt accagcgcac ctacaccacg aagatcaagc cacggctgaa 60  
 gtcggaagat ggagtggaag gagacctcgg ggagacccag agccgtacca tcacagtgc 120  
 cagaagggc acggcctaca ctgtggatgt gactggccgg gaaggagcca aggacataga 180  
 catcagtagc cctgaattca agatcaagat tccaagacat gaactgactg aaatctccaa 240  
 tgtggatgtg gagacccagt ctgggaagac cgtgatcaga ctgccctcgg gctcgggggc 300  
 agcctctccg acaggctctg ctgtggatat ccgagcaggg gccatttctg cttcaggacc 360  
 agagctccaa ggtgctggcc actcgaagct ccaggtcacc atgcctggga taaagggtgg 420  
 aggctcagggt gtcaatgtca atgcaaaggg cttggacttg ggtggcagag gagggggtcca 480  
 agttccagca gtggacattt catcttctct tgggggtagg gcagtagagg tacaggggcc 540  
 atctctggag agtggatgat atggcaaaat taaatttccc accatgaaag tgccgaaatt 600  
 tgggtgtctca acagggcgtg agggccagac accaaaggca gggctgaggg tttctgcacc 660  
 tgaagtctct gtggggcaca agggcggcaa gccaggcttg actatccaag cccctcagct 720  
 ggaagtcagt gtgccctctg ccaatattga gggccttgag gggaagctga agggcccca 780  
 aatcactggg ccactacttg agggtgacct aggcctgaaa ggtgccaaagc cacaggggca 840  
 cattgggggtg gatgcctctg ctccccaat tgggggtagc atcactggcc ccagtgtgga 900  
 agttcaggcc cctgacattg atgttcaggg gcctgggagc aaactgaatg tgccaagat 960  
 gaaagtcccc aagttctctg tatcagggtg aaaggagag gaaactggga ttgatgtgac 1020  
 actgcctaca ggtgaagtga ctgttcctgg ggtctctggg gatgtcagcc tgcctgagat 1080  
 tgctactggt gggctggaag gaaagatgaa aggtactaaa gtgaagactc ctgaaatgat 1140  
 tattcagaaa ctaaaatct ccatgcagga tgtggatctg agccttgggt ctctaaact 1200  
 gaaaggagat attaaggttt ctgctcctgg ggtgcaagggt gatgttaaag gccctcaagt 1260  
 ggcacttaaa ggctccagag tggacataga gacaccaaac ctagagggaa ccttgacagg 1320  
 ccctaggctt ggcagtcctt ccgggaaaac cggaacctgt aggatctcta tgtcagaagt 1380  
 agacttaaat gtggccgcac ctaaagtga aggggggtgta gatgtcacac tccccagagt 1440  
 agaagggaaa gtcaaagtcc ctgaagttga tgtcagaggc ccaaagtgg atgtcagtgc 1500  
 ccagatgtc gaagcgcacg gcccagaatg gaacctgaaa atgcccaaga tgaaaatgcc 1560  
 cacgttcagc actccaggag ccaaagggga aggtccagat gttcatatga ctctacccaa 1620

aggagatatc agtattttcag ggcccaaggt caatgtggaa gccccagatg tcaacttggg	1680
gggtctgggg ggaaaactta aaggccccga tgttaagctg cctgatatga gtgtcaagac	1740
accaaagatc tccatgcctg atgtagatgt gcacgtgaaa ggtacaaagg tgaagggaga	1800
gtatgatgta actgtaccaa agctggaagg agaactcaaa ggcccaaaag tggacattga	1860
tgccccagat gtggatgttc atggcccaga ctggcacttg aagatgcccc agatgaaaat	1920
gccc aaattc agtgtgccag ggttcaaagc agagggcccc gaagtggatg tgaacctgcc	1980
caaggctgat gtggacattt ccgggccccaa gatagatgtt actgctcctg atgtgagcat	2040
tgaggaacca gaagggaaat tgaaagggcc caagttaaag atgcctgaga tgaacatcaa	2100
agtccccaag atctccatgc ctgatgtgga cttacatctg aaaggcccta acgtaaaggg	2160
agaatatgat gtcacaatgc caaagggtga aagtgaagatt aaagttcctg atgttgaact	2220
taaaagtgcc aaaatggaca ttgatgtccc agatgtggag gttcaaggcc cagactggca	2280
cctgaagatg cccaagatga aaatgccccaa gttcagcatg cctggcttca aagcagaggg	2340
cccagaagtg gatgtgaacc tgcccaaggc tgatgtggac atctcaggac ccaaggtggg	2400
tgttgaagtt ccagatgtga atattgaagg acctgaagga aagctgaagg gccc aaagtt	2460
caagatgcca gagatgaata tcaaggcccc caagatctcc atgcctgatg tggacttgca	2520
tatgaaaggt cctaaagtaa agggagaata tgatatgaca gtgccaaagc tggaagggga	2580
cctgaaaggc caaaagtag atgtcagtgcc cccagatgtt gaaatgcagg gtccctgactg	2640
gaacttgaag atgccaaaga ttaaaatgcc caaathtagc atgccagcc tcaaaggaga	2700
ggggccagaa tttgatgtga acctgtccaa agcgaatgtg gacatttctg ctacctaaag	2760
tagatactaa tgctccagat ctgagccttg aaggacctga agggaagttg aaaggccccga	2820
agtttaagat gcctgagatg cacttcagag ctccctaagat gtctttgcca gatgttgacc	2880
tggatcttaa aggacccaaa atgaaaggaa atgtagatat ctctgcacca aagatagagg	2940
gtgaaatgca ggttccagat gtggacatca gaggtcccaa ggtagatatt aaagcaccag	3000
atgtggaagg ccaaggcctg gactggagcc tgaaaatacc caagatgaaa atgcccaagt	3060
tcagcatgcc cagcctcaaa ggcgagggcc cagaagtgga tgtgaacttg cctaaggctg	3120
acgttgttgt ctcaggaccc aaggtggaca tcgaagcccc agatgtgagc ctggaaggtc	3180
cagaagggaa gctgaagggc cccaagttaa agatgcctga gatgcatttc aagaccccca	3240
agatctccat gcctgatgtg gacttacact tgaaaggccc caaagtcaaa ggggatgtgg	3300
atgtgtctgt gcccaaggta gaaggatgaaa tgaaagtgcc agatgttgaa atcaaaggac	3360
ccaaaatgga cattgatgcc ccagatgtgg aggttcaagg ccagactgg cacctgaaga	3420
tgcccaagat gaaaatgccc aagtttagca tgcttggtt caaaggagag ggccgagaag	3480

tg gatgtgaa cctgccccaa gctgacattg atgtctcagg acccaaggtg gatgttgaag	3540
tcccagatgt gagccttgag ggcccgggaag gaaagctgaa gggccccaag tttaagatgc	3600
ctgagatgca cttcaaggcc cccaagatct ccatgcctga tgtggacctg aatcttaagg	3660
ggccaaaatt gaagggagat gtggatgtgt ccttgacctga ggtagaaggt gaaatgaaag	3720
tgccagatgt tgacattaaa gggcccaaag ttgacattag tgctccagat gtggatgttc	3780
atggcccaga ttggcacctg aagatgcccc aggtgaaaat gcccaagtgc agcatgcccg	3840
gcttcaaagg agagggccct gaagtggatg tgaagctgcc caaagctgac gttgatgtct	3900
caggacccaa aatggatgct gaagttccag atgtgaatat tgaaggtcca gacgcaaac	3960
taaaaggtcc caaattcaag atgccagaaa tgagtataaa gcctcagaag atatccatac	4020
cagatgttgg tttgcatttg aaaggtccta aaatgaaagg agattatgat gtaacagttc	4080
caaaagtaga aggagagata aaagctcctg atgttgacat caaaggcccc aaagttgata	4140
ttaatgcacc agatgtggag gttcatggcc cagactggca cctgaagatg cccaaggtaa	4200
aaatgcccaa gttcagcatg cctggcttta aaggagaggg ccagaggtg gatatgaacc	4260
tgcccaaggc tgaccttggg gtttcaggac ccaaggtgga cattgatgtt ccagatgtga	4320
atcttgaagc tccagagggg aaactaaaag gccctaagtt caagatgcca agcatgaata	4380
tacagacgca caaaatctct atgcctgatg ttggacttaa tttgaaaggc cctaaactga	4440
aaactgatgt agatgtttcc cttcccaaag tggaaggaga cttgaagggt cctgaaattg	4500
atgtgaaagc ccctaagatg gatgtgaatg ttggtgatat tgatattgaa ggtccagaag	4560
ggaagttgaa gggccccaag tttaagatgc ctgagatgca tttcaaggcc cccaagatct	4620
ccatgcccga tgtggactta cacttgaaag gcccctaaag caaaggggat atggatgtgt	4680
ctgtgcccga ggtagaaggt gaaatgaaag tgccagatgt tgacattaaa gggcccaaag	4740
tggaattga tgccccagat gtggaggttc acgaccaga ttggcacctg aaaatgcccc	4800
agatgaaaat gcccaagtgc agtatgcctg gcttcaaagc agagggccct gaagtggatg	4860
tgaatctgcc aaaggctgac attgatgtgt ctggaccag tgtggacact gatgctcctg	4920
atttgatat tgagggacca gaaggaaagt tgaaaggctc caaatttaag atgcccaggt	4980
tgaatataaa agctcccaag gtctccatgc cagatgtgga cttgaatttg aagggacca	5040
aactgaaggg agagatagat gcttctgtgc cagaactgga aggtgatctc agagggccgc	5100
aagttgatgt caaaggctct tttgtggaag cggaggtgcc cgatgttgat ctggagtgtc	5160
ctgatgcaaa gttgaaaggg cccaagttta agatgcctga gatgcacttc aaggcccca	5220
agatctccat gcctgatgtg gacttacacc tgaaaggccc caaagtcaaa ggggatgcgg	5280

atgtgtcggg	gccaaaattg	gagggagatt	taacaggccc	cagtgtgggt	gtggaggtgc	5340
ctgatgttga	gctggagtgt	cctgatgcaa	agttgaaagg	ccctaaattt	aagatgccag	5400
acatgcactt	caaggccccc	aagatctcca	tgcctgatgt	ggacttacac		5450

<210> 70  
 <211> 4790  
 <212> DNA  
 <213> Human

<400> 70						
gccgctccag	ggcctcggag	aggccagccg	gcccgcggag	ctgtttaacc	gttccgcggg	60
tcctagaaaag	ccagctgccc	tcaggcttgc	ttaaagggga	gacgccggag	tgggtgtgcc	120
ccgacgtcct	gcgagggcag	cgccgagggg	cgtgtgccct	gaaggcccg	tgaacagccg	180
cttttgccg	ggcgcggtgg	ctcacgcctg	taatcccagc	actttgggag	gccgagggcg	240
gaggatccct	tgggcccagg	aggagtcca	gaccagcctg	ggcagtgtgg	cgagaccgtc	300
ccccaccccc	gtctctaaat	atatataaac	atatatatgt	atatgagcca	ctgttgagcg	360
caatggcggg	ctctgggcga	ggtccggccc	tagagcccca	acgcgacacc	tcgccgccct	420
ctgcaggagc	tgaggcgggc	ggagttggtg	gaaattatcg	tggagacgga	ggcgagacc	480
ggggtcagcg	gcatcaacgt	agcgggcggc	ggcaaagagg	gaatcttcgt	tcgggagctg	540
cgcgaggact	cacccgcgc	caggagcctc	agcctgcagg	aaggggacca	gctgctgagt	600
gcccagagtgt	tcttcagaaa	cttcaagtac	gaggacgcac	tacgcctgct	gcaatgcgcc	660
gagccttaca	aagtctcctt	ctgcctgaag	cgcaactgtc	ccaccgggga	cctggctctg	720
cggcccggga	ccgtgtctgg	ctacgagatc	aagggcccg	gggccaaggt	ggccaagctg	780
aacatccaga	gtctgtcccc	tgtgaagaag	aagaagatgg	tgcctggggc	tctgggggtc	840
cccgtgacc	tggccctgt	tgacgtcgag	ttctccttcc	ccaagttctc	ccgcctgcgt	900
cggggcctca	aagccgaggc	tgtcaagggt	cctgtcccgg	ctgcccctgc	ccgccggcgc	960
ctccagctgc	ctcggctgcg	tgtacgagaa	gtggccgaag	aggctcaggc	agcccggctg	1020
gccgccgccg	ctcctcccc	caggaaagcc	aagggtggagg	ctgaggtggc	tgcaggagct	1080
cgtttcacag	cccctcaggt	ggagctggtt	gggccgcggc	tgccaggggc	ggaggtgggt	1140
gtcccccagg	tctcagcccc	caaggctgcc	ccctcagcag	aggcagctgg	tggctttgcc	1200
ctccacctgc	caacccttgg	gctcggagcc	ccggctccgc	ctgctgtgga	ggccccagcc	1260
gtgggaatcc	aggtccccca	ggtggagctg	cctgccttgc	cctcactgcc	cactctgcc	1320
acacttcct	gcctagagac	ccgggaagg	gctgtgtcgg	tagtggtgcc	caccctggat	1380
gtggcagcac	cgactgtggg	ggtggacctg	gccttgccgg	gtgcagaggt	ggaggcccg	1440

ggagaggcac	ctgaggtggc	cctgaagatg	ccccgcctta	gttttccccg	atttggggct	1500
cgagcaaagg	aagttgctga	ggccaaggta	gccaaggcca	gccctgaggc	caggggtgaaa	1560
ggtcccagac	ttcgaatgcc	cacctttggg	ctttccctct	tggagccccg	gcccgtgtgt	1620
cctgaagttg	tagagagcaa	gctgaagctg	cccaccatca	agatgccctc	ccttggcatc	1680
ggagtgtcag	ggccccaggt	caaggtgccc	aagggacctg	aagtgaagct	ccccaaggct	1740
cctgaggtca	agcttccaaa	agtgcccgag	gcagcccttc	cagaggttcg	actcccagag	1800
gtggagctcc	ccaaggtgtc	agagatgaaa	ctcccaaagg	tgccagagat	ggctgtgccg	1860
gaggtgcggc	ttccagaggt	agagctgccc	aaagtgtcag	agatgaaact	cccaaagggtg	1920
ccagagatgg	ctgtgccgga	ggtgcggctt	ccagaggtac	agctgctgaa	agtgtcggag	1980
atgaaactcc	caaaggtgcc	agagatggct	gtgccggagg	tgccggcttc	agaggtacag	2040
ctgccgaaag	tgtcagagat	gaaactccca	gaggtgtcag	aggtggctgt	gccagaggtg	2100
cggcttccag	aggtgcagct	gccgaaagtg	ccagagatga	aagtccctga	gatgaagctt	2160
ccaaaggtgc	ctgagatgaa	acttctctgag	atgaaactcc	ctgaagtgca	actcccgaag	2220
gtgcccagaa	tggccgtgcc	cgatgtgcac	ctcccagaag	tgagcttcc	aaaagtccca	2280
gagatgaagc	tccttgagat	gaaactccct	gaggtgaaac	tcccgaaggt	gcccagagatg	2340
gctgtgcccc	atgtgcacct	cccggaaagtg	cagctcccga	aagtcccaga	gatgaaactc	2400
cctaaaatgc	ctgagatggc	tgtgccagag	gttcgactcc	ccgaggtgca	gctgccccaa	2460
gtctcagaga	tgaaactccc	caaggtgcct	gaaatggccg	tgcccgatgt	gcacctccca	2520
gaggtgcagc	tgcccaaagt	ctgtgaaatg	aaagtccctg	acatgaagct	cccagagata	2580
aaactcccca	aggtgcctga	gatggctgtg	cccgatgtgc	acctccccga	ggtgcagctg	2640
ccgaaagtgt	cagagattcg	gctgccggaa	atgcaagtgc	cgaagggttc	cgacgtgcat	2700
cttccgaagg	caccagaggt	gaagctgccc	agggctccgg	aggtgcagct	aaaggccacc	2760
aaggcagaac	aggcagaagg	gatggaattt	ggcttcaaga	tgcccaagat	gaccatgccc	2820
aagctaggga	gggcagagtc	cccatcacgt	ggcaagccag	gcgaggcggg	tgctgaggtc	2880
tcagggaagc	tggtaacact	tccctgtctg	cagccagagg	tggatggtga	ggctcatgtg	2940
ggtgtccctt	ctctcactct	gccttcagtg	gagctagacc	tgccaggagc	acttggcctg	3000
caggggagag	tcccagccgc	taaaatgggc	aaggagagac	gggtggaggg	ccctgaggtg	3060
gcagcagggg	tcagggaagt	gggcttccga	gtgccctctg	ttgaaattgt	cacccacag	3120
ctgccgcggg	tggaaattga	ggaaggcgcg	ctggagatga	tagagacaaa	agtcaagccc	3180
tcttccaagt	tctccttacc	taagtttggg	ctctcggggc	caaaggtggc	taaggcagag	3240
gctgaggggg	ctgggagagc	taccaagctg	aaggtatcca	aatttgccat	ctcactcccc	3300

aaggctcggg	tgggggctga	ggctgaggcc	aaaggggctg	gggaggcagg	cctgctgcct	3360
gccctcgatc	tgtccatccc	acagctcagc	ctggatgccc	acctgccctc	aggcaaggta	3420
gaggtggcag	gggccgacct	caagttcaag	gggccaggt	ttgctctccc	caagtttggg	3480
gtcagaggcc	gggacactga	ggcagcagaa	ctagtgccag	gggtggctga	gttggagggc	3540
aagggctggg	gctgggatgg	gaggggtgaag	atgcccaagc	tgaaggtgtc	cacagccggg	3600
caggtgggtca	ctgagggccca	tgacgcgggg	ctgaggatgc	ctccgctggg	catctccctg	3660
ccacaggtgg	agctgaccgg	ctttggggag	gcaggtaccc	cagggcagca	ggctcagagt	3720
acagtccctt	cagcagaggg	cacagcaggc	tacagggttc	aggtgcccc	ggtgaccctg	3780
tctctgcctg	gagcccaggt	tgacaggtgg	gagctgctgg	tgggtgaggg	tgtctttaag	3840
atgcccaccg	tgacagtgcc	ccagcttgag	ctggacgtgg	ggctaagccg	agaggcacag	3900
gcgggcgagg	cggccacagg	cgaggggtgg	ctgaggctga	agttgcccac	actggggggc	3960
agagctaggg	tggggggcga	gggtgctgag	gagcagcccc	cagggggccga	gcgtaccttc	4020
tgcctctcac	tgcccagcgt	ggagctctcg	ccatccgggg	gcaaccatgc	cgagtaccag	4080
gtggcagagg	gggagggaga	ggccggacac	aagctcaagg	tacggctgcc	ccggtttggc	4140
ctggtgcggg	ccaaggaggg	ggccgaggag	ggtgagaagg	ccaagagccc	caaactcagg	4200
ctgccccgag	tgggcttcag	ccaaagtgag	atggctactg	gggaagggtc	ccccagcccc	4260
gaggaggagg	aggaggagga	ggaagagggc	agtggggaag	gggcctcggg	tcgccggggc	4320
cgggtccggg	tccgcttgcc	acgtgtaggc	ctggcgcccc	cttctaaagc	ctctcggggg	4380
caggagggcg	atgcagcccc	caagtcccc	gtcagagaga	agtcacccaa	gttccgcttc	4440
cccagggtgt	ccctaagccc	caaggccccg	agtgggagtg	gggaccagga	agagggtgga	4500
ttgcgggtgc	ggctgcccag	cgtgggggtt	tcaagacag	gggctccagg	cccggccagg	4560
atggaggggg	ctcaggctgc	ggctgtctga	agccccctagt	cagatgggga	tcccttcttg	4620
ccttcctttc	tctacccctt	cgctgttgtg	tgtgtgataa	ctagcactaa	ccctaagagg	4680
gccgggaggt	gggtgactga	ccagggtctg	cagggaggcc	tgctcctgtc	tctctggcag	4740
gagtgcctgt	acccaccaa	gccatgtgaa	taaaataatc	tggaagtagc		4790

<210> 71  
 <211> 4853  
 <212> DNA  
 <213> Human

<400> 71	
gctctcgagg	tgtctggagg
ctcagcgagc	gccggaccca
ggaggcccaa	ggagctggag
	60
gtgaccctca	ggcagcaaga
acccacgga	agggcgtag
ccctgcagac	agctgtgcgg
	120

cacctcgggc	tgggctcctg	ttaggaggaa	gtgcctgcac	ccaggcagcg	gctcagaggc	180
agctgctcca	tgcagaactg	aagctgggtc	tgcagcagaa	aggggagagg	acacaggagc	240
ctggggtgca	ggtgcctccc	agcaacgcca	tggaggccag	gagccggagt	gccgaggagc	300
tgaggcgggc	ggagttggtg	gaaattatcg	tggagacgga	ggcgagacc	ggggtcagcg	360
gcatcaacgt	agcgggcggc	ggcaaagagg	gaatcttcgt	tcgggagctg	cgcgaggact	420
cacccgccgc	caggagcctc	agcctgcagg	aaggggacca	gctgctgagt	gcccagagtgt	480
tcttcgagaa	cttcaagtac	gaggacgcac	tacgcctgct	gcaatgcgc	gagccttaca	540
aagtctcctt	ctgcctgaag	cgcactgtgc	ccaccgggga	cctggctctg	cgggccggga	600
ccgtgtctgg	ctacgagatc	aaggggccgc	gggccaaggt	ggccaagctg	aacatccaga	660
gtctgtcccc	tgtgaagaag	aagaagatgg	tgcctggggc	tctgggggtc	cccgtgacc	720
tggcccctgt	tgacgtcgag	ttctcctttc	ccaagtcttc	ccgcctgcgt	cggggcctca	780
aagccgaggc	tgtcaagggt	cctgtcccgg	ctgcccctgc	ccgccggcgc	ctccagctgc	840
ctcggctgcg	tgtacgagaa	gtggccgaag	aggctcaggc	agcccggctg	gccgccgccg	900
ctcctcccc	caggaaagcc	aagggtggagg	ctgaggtggc	tgcaggagct	cgtttcacag	960
cccctcaggt	ggagctggtt	gggccgcggc	tgccaggggc	ggaggtgggt	gtcccccagg	1020
tctcagcccc	caaggctgcc	ccctcagcag	aggcagctgg	tggctttgcc	ctccacctgc	1080
caacccttgg	gctcggagcc	ccggctccgc	ctgctgtgga	ggccccagcc	gtgggaatcc	1140
aggtccccca	ggtggagctg	cctgccttgc	cctcactgcc	cactctgccc	acacttcctt	1200
gcctagagac	ccgggaaggg	gctgtgtcgg	tagtggtgcc	caccctggat	gtggcagcac	1260
cgactgtggg	ggtggacctg	gccttgccgg	gtgcagaggt	ggaggcccg	ggagaggcac	1320
ctgaggtggc	cctgaagatg	ccccgcctta	gttttccccg	atttggggct	cgagcaaagg	1380
aagttgctga	ggccaaggta	gccaagggtca	gccctgaggc	cagggtgaaa	ggtcccagac	1440
ttcgaatgcc	cacctttggg	ctttccctct	tggagccccg	gcccgtgct	cctgaagttg	1500
tagagagcaa	gctgaagctg	cccaccatca	agatgccctc	ccttggcatc	ggagtgtcag	1560
ggcccgaggt	caagggtgcc	aagggaacctg	aagtgaagct	ccccaaggct	cctgaggtca	1620
agcttccaaa	agtgcccgag	gcagcccttc	cagaggttcg	actcccagag	gtggagctcc	1680
ccaagggtgc	agagatgaaa	ctcccaaagg	tgccagagat	ggctgtgccg	gaggtgcggc	1740
ttccagaggt	agagctgccc	aaagtgtcag	agatgaaact	cccaaagggtg	ccagagatgg	1800
ctgtgccgga	ggtgcggctt	ccagaggtac	agctgctgaa	agtgtcggag	atgaaactcc	1860
caaagggtgcc	agagatggct	gtgccggagg	tgcggcttcc	agaggtacag	ctgccgaaag	1920

tgtcagagat	gaaactccca	gaggtgtcag	aggtggctgt	gccagaggtg	cggttccag	1980
aggtgcagct	gccgaaagt	ccagagatga	aagtcctga	gatgaagctt	ccaaaggtgc	2040
ctgagatgaa	acttctgag	atgaaactcc	ctgaagtgc	actcccgaag	gtgcccgaga	2100
tggccgtgcc	cgatgtgcac	ctcccagaag	tgcagcttcc	aaaagtccca	gagatgaagc	2160
tccctgagat	gaaactccct	gaggtgaaac	tcccgaaggt	gcccagagatg	gctgtgccc	2220
atgtgcacct	cccgaagt	cagctcccga	aagtcccaga	gatgaaactc	cctaaaatgc	2280
ctgagatggc	tgtgccagag	gttcgactcc	ccgaggtgca	gctgccaaaa	gtctcagaga	2340
tgaaactccc	caaggtgcct	gaaatggccg	tgcccgatgt	gcacctccca	gaggtgcagc	2400
tgcccaaagt	ctgtgaaatg	aaagtccctg	acatgaagct	cccagagata	aaactcccca	2460
aggtgcctga	gatggctgtg	cccgatgtgc	acctccccga	ggtgcagctg	ccgaaagtgt	2520
cagagattcg	gctgccggaa	atgcaagtgc	cgaaggttcc	cgacgtgcat	cttccgaagg	2580
caccagaggt	gaagctgcc	agggctccgg	aggtgcagct	aaaggccacc	aaggcagaac	2640
aggcagaagg	gatggaattt	ggcttcaaga	tgcccaagat	gaccatgccc	aagctaggga	2700
gggcagagtc	cccatcacgt	ggcaagccag	gcgaggcggg	tgctgaggtc	tcagggaagc	2760
tggtaacact	tccctgtctg	cagccagagg	tggatggtga	ggctcatgtg	ggtgtcccct	2820
ctctcactct	gccttcagt	gagctagacc	tgccaggagc	acttggcctg	caggggcagg	2880
tcccagccgc	taaaatgggc	aaggagagc	gggtggagg	ccctgaggtg	gcagcagggg	2940
tcagggaagt	gggcttccga	gtgccctctg	ttgaaattgt	cacccacag	ctgccgcgg	3000
tggaaattga	ggaagggcg	ctggagatga	tagagacaaa	agtcaagccc	tcttccaagt	3060
tctccttacc	taagtttgga	ctctcggggc	caaaggtggc	taaggcagag	gctgagggg	3120
ctgggagagc	taccaagctg	aaggtatcca	aatttgccat	ctcactcccc	aaggctcggg	3180
tgggggctga	ggctgaggcc	aaaggggctg	gggaggcagg	cctgctgcct	gccctcgatc	3240
tgtccatccc	acagctcagc	ctggatgccc	acctgccctc	aggcaaggta	gaggtggcag	3300
gggccgacct	caagttcaag	gggccaggt	ttgctctccc	caagtttggg	gtcagaggcc	3360
gggacactga	ggcagcagaa	ctagtgccag	gggtggctga	gttgaggggc	aagggtggg	3420
gctgggatgg	gaggtgaag	atgcccaagc	tgaagatgcc	ttccttggg	ctggctcgag	3480
ggaaggaagc	agaagttcaa	ggtgatcgtg	ccagcccggg	ggaaaaggct	gagtccaccg	3540
ctgtgcagct	taagatcccc	gaggtggagc	tggtcacgct	gggcgcccag	gaggaaggga	3600
gggcagagg	ggctgtggcc	gtcagtggaa	tgcagctgtc	aggcctgaag	gtgtccacag	3660
ccgggcaggt	ggtcactgag	ggccatgacg	cggggctgag	gatgcctccg	ctgggcatct	3720
ccctgccaca	ggtggagctg	accggctttg	gggaggcagg	tacccagg	cagcaggctc	3780



agagtacagt	cccttcagca	gagggcacag	caggctacag	ggttcaggtg	ccccaggtga	3840
ccctgtctct	gcctggagcc	caggttgacg	gtggtgagct	gctggtgggt	gaggggtgtct	3900
ttaagatgcc	caccgtgaca	gtgccccagc	ttgagctgga	cgtggggcta	agccgagagg	3960
cacaggcggg	cgaggcggcc	acaggcgagg	gtgggctgag	gctgaagttg	cccacactgg	4020
gggccagagc	taggggtggg	ggcgaggggtg	ctgaggagca	gccccaggg	gccgagcgta	4080
ccttctgcct	ctcactgccc	gacgtggagc	tctcgccatc	cgggggcaac	catgccgagt	4140
accaggtggc	agagggggag	ggagaggccg	gacacaagct	caaggtacgg	ctgccccggt	4200
ttggcctggg	gcggggccaag	gagggggccg	aggaggggtg	gaaggccaag	agccccaaac	4260
tcaggctgcc	ccgagtgggc	ttcagccaaa	gtgagatggg	cactggggaa	gggtcccca	4320
gccccgagga	ggaggaggag	gaggaggaag	agggcagtg	ggaaggggcc	tcgggtcgcc	4380
ggggccgggt	ccgggtccgc	ttgccacgtg	taggcctggc	ggccccttct	aaagcctctc	4440
gggggcagga	gggcgatgca	gcccccaagt	cccccgtag	agagaagtca	cccaagttcc	4500
gcttccccag	ggtgtcccta	agccccaaag	cccgagtg	gagtggggac	caggaagagg	4560
gtggattg	ggtgcggctg	cccagcgtgg	ggttttcaga	gacaggggct	ccaggccccg	4620
ccaggatgga	gggggctcag	gctgcggctg	tctgaagccc	ctagtcagat	ggggatccct	4680
tcttgcttcc	ctttctctac	cccctcgctg	ttgtgtgtgt	gataactagc	actaacccta	4740
agagggccgg	gaggtgggtg	actgaccagg	gctggcagg	aggcctgctc	ctgtctctct	4800
ggcaggagt	cctgtacccc	accaagccat	gtgaataaaa	taatctggaa	gta	4853

<210> 72  
 <211> 5502  
 <212> DNA  
 <213> Human

<400> 72	
gctctcgagg	tgtctggagg
ctcagcgagc	gccggaccca
ggaggcccaa	ggagctggag
60	
gtgaccctca	ggcagcaaga
acccccacgga	agggcgtag
ccctgcagac	agctgtgcgg
120	
cacctcgggc	tgggctcctg
ttaggaggaa	gtgcctgcac
ccaggcagcg	gctcagaggc
180	
agctgctcca	tgcagaactg
aagctggttc	tgcagcagaa
aggggagagg	acacaggagc
240	
ctgggggtgca	ggtgcctccc
agcaacgcca	tggaggccag
gagccggagt	gccgaggagc
300	
tgaggcgggc	ggagttggtg
gaaattatcg	tggagacgga
ggcgagacc	ggggtcagcg
360	
gcatcaacgt	agcgggcggc
ggcaaagagg	gaatcttcgt
tcgggagctg	cgcgaggact
420	
cacccgccgc	caggagcctc
agcctgcagg	aaggggacca
gctgctgagt	gcccgagtgt
480	
tcttcgagaa	cttcaagtac
gaggacgcac	tacgcctgct
gcaatgcgcc	gagccttaca
540	

aagtctcctt	ctgcctgaag	cgcactgtgc	ccaccgggga	cctggctctg	cggccccggga	600
ccgtgtctgg	ctacgagatc	aaggggccgc	gggccaaggt	ggccaagctg	gtacgcgtgc	660
ttagcccggc	cccggccctg	gactgcccc	gcgatccggt	ctctgcgccg	tgagccccat	720
tccccgccat	cgtggggcag	ccttgccctc	tgtcttgtca	ctaaccgaag	ctaattccac	780
cctctgcccc	ttcctctctg	ccccaaactc	ttccccggga	agggggacag	acccacccca	840
gccaggggc	ctcaccacc	tcggagaggc	gtccccacca	tcggatccag	gcttgctagg	900
ggtcctgaac	caggctactt	cgaaccagga	aagccagatt	ccagcctgag	tgctggccca	960
attactgctg	agtggccctg	gacaaagttg	tttctctccc	tgggcctcag	tttccccatc	1020
tctagaatga	ggatgttggg	gaaaatcccg	gatcaggatc	tagaagtctt	gggtccccgt	1080
ccctacactc	ctgttgactc	atltggagat	cctagatggc	tgctgtcttt	cctgggcact	1140
catggtgaaa	tgacaggcaa	gaagtgggga	tgatgttttg	ggaacaagat	acttgaccca	1200
gcacatcccc	cgccctgtcc	aataccaggt	ggggctcttc	ctgtccactc	ccagcctccc	1260
actgtcccac	cgccctctgc	ctctctctct	tctccccaga	acatccagag	tctgtcccct	1320
gtgaagaaga	agaagatggg	gcctgggggt	ctgggggtcc	ccgctgacct	ggccccgtt	1380
gacgtcgagt	tctcctttcc	caagttctcc	cgccctgcgc	ggggcctcaa	agccgaggct	1440
gtcaagggtc	ctgtcccggc	tgccccctgc	cgccggcgcc	tccagctgcc	tcggctgcgt	1500
gtacgagaag	tggccgaaga	ggctcaggca	gcccggtg	ccgccgccgc	tcctcccccc	1560
aggaaagcca	aggtggaggc	tgaggtggct	gcaggagctc	gtttcacagc	ccctcagggtg	1620
gagctggttg	ggccgcggct	gccagggg	gaggtgggtg	tccccaggt	ctcagcccc	1680
aaggctgccc	cctcagcaga	ggcagctggt	ggctttgccc	tccacctgcc	aacccttggg	1740
ctcgagagccc	cggtctcgcc	tgctgtggag	gccccagccg	tgggaatcca	ggtccccag	1800
gtggagctgc	ctgccttgcc	ctcactgccc	actctgcca	cattccctg	cctagagacc	1860
cggaagggg	ctgtgtcggt	agtgggtgcc	accctggatg	tggcagcacc	gactgtgggg	1920
gtggacctgg	ccttgccggg	tgagaggtg	gaggcccg	gagaggcacc	tgaggtggcc	1980
ctgaagatgc	ccgccttag	ttttccccga	tttggggctc	gagcaaagga	agttgtgag	2040
gccaaggtag	ccaaggtcag	ccctgaggcc	agggtgaaag	gtcccagact	tcgaatgccc	2100
acctttgggc	tttccctctt	ggagccccgg	cccgtgctc	ctgaagttgt	agagagcaag	2160
ctgaagctgc	ccaccatcaa	gatgccctcc	cttggcatcg	gagtgtcagg	gcccagagtc	2220
aagggtgcca	agggacctga	agtgaagctc	cccaaggctc	ctgaggtcaa	gcttccaaaa	2280
gtgcccagag	cagcccttcc	agaggttcga	ctcccagagg	tggagctccc	caaggtgtca	2340

gagatgaaac tcccaaaggt gccagagatg gctgtgccgg aggtgcggct tccagaggta 2400  
gagctgcca aagtgtcaga gatgaaactc ccaaaggtgc cagagatggc tgtgccggag 2460  
gtgcggcttc cagaggtaca gctgctgaaa gtgtcggaga tgaaactccc aaaggtgcc 2520  
gagatggctg tgccggaggt gcggtctcca gaggtacagc tgccgaaagt gtcagagatg 2580  
aaactcccag aggtgtcaga ggtggctgtg ccagaggtgc ggcttccaga ggtgcagctg 2640  
ccgaaagtgc cagagatgaa agtccctgag atgaagcttc caaaggtgcc tgagatgaaa 2700  
cttctgaga tgaaactccc tgaagtcaa ctcccgaagg tgcccagat ggccgtgccc 2760  
gatgtgcacc tcccagaagt gcagcttcca aaagtcccag agatgaagct ccctgagatg 2820  
aaactccctg aggtgaaact cccgaaggtg cccgagatgg ctgtgccga tgtgcacctc 2880  
ccggaagtgc agctcccga agtcccagag atgaaactcc ctaaaatgcc tgagatggct 2940  
gtgccagagg ttcgactccc cgaggtgcag ctgccaaaag tctcagagat gaaactcccc 3000  
aaggtgcctg aaatggccgt gccgatgtg cacctcccag aggtgcagct gcccaaagtc 3060  
tgtgaaatga aagtccctga catgaagctc ccagagataa aactcccaa ggtgcctgag 3120  
atggctgtgc ccgatgtgca cctccccgag gtgcagctgc cgaaagtgtc agagattcgg 3180  
ctgccgaaa tgcaagtgcc gaaggttccc gacgtgcac ttccgaaggc accagaggtg 3240  
aagctgcca gggctccga ggtgcagcta aaggccacca aggcagaaca ggcagaaggg 3300  
atggaatttg gcttcaagat gcccaagatg accatgcca agctaggagg ggcagagtcc 3360  
ccatcacgtg gcaagccagg cgaggcgggt gctgaggtct cagggaagct ggtaacactt 3420  
ccctgtctgc agccagaggt ggatggtgag gctcatgtgg gtgtcccctc tctactctg 3480  
ccttcagtgg agctagacct gccaggagca cttggcctgc aggggcaggt cccagccgct 3540  
aaaatgggca agggagagcg ggtggagggc cctgaggtgg cagcaggggt cagggaagtg 3600  
ggcttccgag tgccctctgt tgaaattgtc accccacagc tgcccgccgt ggaaattgag 3660  
gaagggcggc tggagatgat agagacaaaa gtcaagccct cttccaagtt ctcttacct 3720  
aagtttgac tctcggggcc aaaggtggct aaggcagagg ctgagggggc tgggcgagct 3780  
accaagctga aggtatccaa atttgccatc tcaactccca aggtcgggt gggggctgag 3840  
gctgaggcca aaggggctgg ggaggcaggc ctgctgcctg ccctcgatct gtccatccca 3900  
cagctcagcc tggatgcca cctgccctca ggcaaggtag aggtggcagg ggccgacctc 3960  
aagttcaagg ggcccaggtt tgctctcccc aagtttgggg tcagaggccg ggacactgag 4020  
gcagcagaac tagtgccagg ggtggctgag ttggagggca agggctgggg ctgggatggg 4080  
agggatgaaga tgcccaagct gaagatgcct tcctttgggc tggctcgagg gaaggaagca 4140  
gaagttcaag gtgatcgtgc cagcccgggg gaaaaggctg agtccaccgc tgtgcagctt 4200

aagatccccg aggtggagct ggtcacgctg ggcgcccagg aggaagggag ggcagagggg	4260
gctgtggccg tcagtggaat gcagctgtca ggcctgaagg tgtccacagc cgggcaggtg	4320
gtcactgagg gccatgacgc ggggctgagg atgcctccgc tgggcatctc cctgccacag	4380
gtggagctga ccggcttttg ggaggcaggt accccagggc agcaggctca gagtacagtc	4440
ccttcagcag agggcacagc aggctacagg gttcaggtgc cccaggtgac cctgtctctg	4500
cctggagccc aggttgacag tggtagctg ctggtgggtg aggggtgtctt taagatgccc	4560
accgtgacag tgccccagct tgagctggac gtgggggctaa gccgagaggc acaggcgggc	4620
gaggcggcca caggcgaggg tgggctgagg ctgaagttgc ccacactggg ggccagagct	4680
aggggtggggg gcgaggggtgc tgaggagcag cccccagggg ccgagcgtag cttctgcctc	4740
tcactgcccc acgtggagct ctgcgccatcc gggggcaacc atgccgagta ccaggtggca	4800
gagggggagg gagaggccgg acacaagctc aaggtacggc tgccccggtt tggcctggtg	4860
cgggccaaagg agggggccga ggagggtgag aaggccaaga gcccctaaact caggctgccc	4920
cgagtgggct tcagccaaag tgagatggtc actggggaag ggtccccag ccccaggag	4980
gaggaggagg aggaggaaga gggcagtggt gaaggggcct cgggtcgccg gggccgggtc	5040
cgggtccgct tgccacgtgt aggcctggcg gcccttcta aagcctctcg ggggcaggag	5100
ggcgatgcag ccccaagtc ccccgtcaga gagaagtcac ccaagttccg cttccccagg	5160
gtgtccctaa gcccgaaggc ccggagtggg agtggggacc aggaagaggg tggattgcgg	5220
gtgcggtgc ccagcgtggg gttttcagag acaggggctc caggcccggc caggatggag	5280
ggggctcagg ctgcggtgt ctgaagcccc tagtcagatg gggatccctt cttgccttcc	5340
tttctctacc ccctcgctgt tgtgtgtgtg ataactagca ctaaccctaa gagggccggg	5400
aggtgggtga ctgaccaggg ctggcaggga ggcctgctcc tgtctctctg gcaggagtgc	5460
ctgtaccca ccaagccatg tgaataaaat aatctggaag ta	5502

<210> 73

<211> 1485

<212> DNA

<213> Arabidopsis thaliana

<400> 73

atcacaaca caaagcaaca acaaacacca caaaagcaaa agaagaaaca aacgcaagag	60
ttctcaagca agctcaaaca tggcactaat gaagaagagt ctctctgctg ctcttctctc	120
atcaccactt ctgatcatat gtcttatcgc attgctcgct gatccgtttt cagtcgggtgc	180
tcgccggtta ttggaggatc ctaaaccgga gataccaaaa ttgcctgagc tacctaaatt	240
cgaagttccc aagttgccgg agttccctaa accagagttg cccaagttac ccgaatttcc	300

aaagcctgag	ttgccaaaga	tcccggagat	tccaaagcca	gagttaccaa	aggtaccgga	360
gattccaaag	cctgaggaaa	ctaaactgcc	agatattccc	aagcttgaat	tgcccaagtt	420
tccggaaatt	ccaaaacctg	agctcccaaa	gatgccagag	attccaaaac	ctgagttacc	480
aaaggtaccg	gagattcaga	agcccagagt	acaaaaaatg	ccggagattc	caaagcctga	540
attaccaaag	tttcagaga	ttccaaagcc	tgatttgcca	aagtttccag	agaattcaaa	600
gtctgaggtg	cctaagctaa	tggagactga	aaagcctgag	gctcctaagg	tgccagagat	660
tccaaagcct	gagttgcaa	agttgccaga	agttcccaag	cttgaggctc	ctaaggtacc	720
agagatccag	aagccggagt	tgcccaaaat	gccggagtta	cctaagatgc	cggagattca	780
gaaacctgag	ttgccaaagt	tgccagaagt	tcccaagctt	gaggctccta	aggtaccgga	840
gatccagaag	ccggagttgc	ccaaaatgcc	ggagttacct	aagatgccgg	agattcagaa	900
acccgagttg	ccaagatgc	cggagattca	gaagcctgag	ttgccgaagg	tgccagaggt	960
tccaaagccc	gaattgcaa	cggttccaga	ggttccaaag	tctgaggctc	ctaagtttcc	1020
agagattcca	aagcctgaac	tgccgaagat	tccagaagtt	ccaaaacctg	aactgcccaa	1080
ggttccagaa	attacaaaac	ctgcagttcc	agagattcca	aagccagagc	taccgacgat	1140
gcctcaactt	ccaagttgc	cgggaattccc	aaaagttccc	ggaactcctt	aagcgaagag	1200
aaggcccgac	tactttgaag	cccatcccac	aatcttaaag	taccgtttta	ccgttatacc	1260
atttgtctat	ttgcagagat	gcacttatgt	ctgtctacat	cattgtttcc	ttagtaaaaa	1320
ccatgtcgta	tggttggtct	catagtcata	gttcttgttt	tttttgggta	aagactatac	1380
acttatactt	gtataattgt	atcctgttat	attttgtatt	gtttgtttcc	atacagattt	1440
cgttgtat	gatatacttt	ttaattgatt	atgttactta	tttaa		1485

<210> 74  
 <211> 421  
 <212> DNA  
 <213> Xenopus

<400> 74	
tcactgatgt	gaggctttta acagtcattt tgggcatctt ggtctttgga cccttgactt 60
ctacacttcc	ggatggtggc gacactgtga catctgagga ctgtacagcc cgtttaaggc 120
agtatgagac	tttgtaaggc tccatgcact gaagtaattt taaagcttct tcatatttga 180
cattttcaaa	aaagacatgg gcacttagga gctggtctcc ttccaaaaga ggcaacgttt 240
tagcagcagg	tgaatccttg acaacatctc tgataatcac tccctctctg ccacctccag 300
aatgacgat	gccactcatg ccagcttttag cttctgtttc tacaataacc tctaccacct 360
ctgaggtttg	cagcgtctcc tctttcccct tgtctgagtg tcagtgctgg agcgtgggtg 420

a

421

<210> 75  
 <211> 5502  
 <212> DNA  
 <213> Human

<400> 75  
 gctctcgagg tgtctggagg ctcagcgagc gccggaccca ggaggcccaa ggagctggag 60  
 gtgaccctca ggcagcaaga accccacgga agggcgtagg ccctgcagac agctgtgcgg 120  
 cacctcgggc tgggctcctg ttaggaggaa gtgcctgcac ccaggcagcg gctcagaggc 180  
 agctgctcca tgcagaactg aagctgggtc tgcagcagaa aggggagagg acacaggagc 240  
 ctggggtgca ggtgcctccc agcaacgcca tggaggccag gagccggagt gccgaggagc 300  
 tgaggcgggc ggagttggtg gaaattatcg tggagacgga ggcgcagacc ggggtcagcg 360  
 gcatcaacgt agcgggcggc ggcaaagagg gaatcttcgt tcgggagctg cgcgaggact 420  
 caccgcgcgc caggagcctc agcctgcagg aaggggacca gctgctgagt gcccgagtgt 480  
 tcttcgagaa cttcaagtac gaggacgcac tacgcctgct gcaatgcgcc gagccttaca 540  
 aagtctcctt ctgcctgaag cgcactgtgc ccaccgggga cctggctctg cgccccggga 600  
 ccgtgtctgg ctacgagatc aaggggccgc gggccaaggt ggccaagctg gtacgcgtgc 660  
 ttagcccggc cccggccctg gactgcccc a gcatccggt ctctgcgccg tgagcccat 720  
 tccccgccat cgtggggccag ccttgccctc tgtcttgtca ctaaccaag ctaattccac 780  
 cctctgcccc ttctctctctg ccccaaaactc ttccccggga agggggacag acccacccca 840  
 gcccagggcc ctcaccacc tcggagaggc gtccccacca tcggatccag gcttgctagg 900  
 ggtcctgaac caggctactt cgaaccagga aagccagatt ccagcctgag tgctggccca 960  
 attactgctg agtggccctg gacaaagttg tttctctccc tgggcctcag tttccccatc 1020  
 tctagaatga ggatgttggg gaaaatcccg gatcaggatc tagaagtctt ggggtcccgt 1080  
 ccctacactc ctgttgactc atttgagat cctagatggc tgctgcttt cctgggcact 1140  
 catggtgaaa tgacaggcaa gaagtgggga tgatgttttg ggaacaagat acttgacca 1200  
 gcacatcccc cgcttggtcc aataccaggt ggggctcttc ctgtccactc ccagcctccc 1260  
 actgtcccac cgctcctgc ctctctctc tctccccaga acatccagag tctgtcccct 1320  
 gtgaagaaga agaagatggt gcctggggct ctgggggtcc ccgctgacct ggccccgtt 1380  
 gacgtcgagt tctcctttcc caagtctctc cgctgcgtc ggggcctcaa agccgaggct 1440  
 gtcaagggtc ctgtcccggc tgcccctgcc cgccggcgcc tccagctgcc tcggctgcgt 1500  
 gtacgagaag tggccgaaga ggctcaggca gcccggtggt ccgcccgcgc tcctcccccc 1560

aggaaagcca	aggtggaggc	tgaggtggct	gcaggagctc	gtttcacagc	ccctcaggtg	1620
gagctggttg	ggccgcggct	gccaggggcg	gaggtgggtg	tccccaggt	ctcagccccc	1680
aaggctgccc	cctcagcaga	ggcagctggg	ggctttgccc	tccacctgcc	aacccttggg	1740
ctcggagccc	cggtccgcc	tgctgtggag	gccccagccg	tgggaatcca	ggccccccag	1800
gtggagctgc	ctgccttgcc	ctcaactgcc	actctgccc	cacttccctg	cctagagacc	1860
cgggaagggg	ctgtgtcggg	agtgggtgcc	accctggatg	tggcagcacc	gactgtgggg	1920
gtggacctgg	ccttgccggg	tgcaagaggtg	gaggccccggg	gagaggcacc	tgaggtggcc	1980
ctgaagatgc	ccgccttag	ttttccccga	tttggggctc	gagcaaagga	agttgctgag	2040
gccaaggtag	ccaaggtcag	ccctgaggcc	agggtgaaa	gtcccagact	tcgaatgccc	2100
acctttgggc	tttccctctt	ggagccccgg	cccgtgctc	ctgaagttgt	agagagcaag	2160
ctgaagctgc	ccaccatcaa	gatgccctcc	cttggcacgc	gagtgtcagg	gcccagagtc	2220
aaggtgccc	agggacctga	agtgaagctc	cccaaggctc	ctgaggtcaa	gcttccaaaa	2280
gtgcccagag	cagcccttcc	agaggttcga	ctcccagagg	tggagctccc	caaggtgtca	2340
gagatgaaac	tcccaaaggt	gccagagatg	gctgtgccgg	aggtgcggct	tccagaggta	2400
gagctgccc	aagtgtcaga	gatgaaactc	ccaaaggtgc	cagagatggc	tgtgccggag	2460
gtgcggttc	cagaggtaca	gctgctgaaa	gtgtcggaga	tgaaactccc	aaaggtgcca	2520
gagatggctg	tgccggaggt	gcggtctcca	gaggtacagc	tgccgaaagt	gtcagagatg	2580
aaactcccag	aggtgtcaga	ggtggctgtg	ccagaggtgc	ggcttccaga	ggtgcagctg	2640
ccgaaagtgc	cagagatgaa	agtccctgag	atgaagcttc	caaaggtgcc	tgagatgaaa	2700
cttcctgaga	tgaaactccc	tgaagtgcaa	ctcccgaagg	tgcccagatg	ggccgtgccc	2760
gatgtgcacc	tcccagaagt	gcagcttcca	aaagtcccag	agatgaagct	ccctgagatg	2820
aaactccctg	aggtgaaact	cccgaaggtg	cccagatggg	ctgtgcccga	tgtgcacctc	2880
ccggaagtgc	agctcccga	agtcccagag	atgaaactcc	ctaaaatgcc	tgagatggct	2940
gtgccagagg	ttcgactccc	cgaggtgcag	ctgccccaa	tctcagagat	gaaactcccc	3000
aaggtgcctg	aaatggccgt	gcccgatgtg	cacctcccag	aggtgcagct	gccccaaagtc	3060
tgtgaaatga	aagtccctga	catgaagctc	ccagagataa	aactccccaa	ggtgcctgag	3120
atggctgtgc	ccgatgtgca	cctccccgag	gtgcagctgc	cgaaagtgtc	agagattcgg	3180
ctgccgaaa	tgcaagtgcc	gaaggttccc	gacgtgcac	ttccgaaggc	accagaggtg	3240
aagctgccc	gggtccgga	ggtgcagcta	aaggccacca	aggcagaaca	ggcagaaggg	3300
atggaatttg	gcttcaagat	gcccagatg	accatgccc	agctaggagg	ggcagagtcc	3360

ccatcacgtg gcaagccagg cgaggcgggt gctgaggtct cagggaagct ggtaacactt	3420
ccctgtctgc agccagaggt ggatggtgag gctcatgtgg gtgtcccctc tctcactctg	3480
ccttcagtgg agctagacct gccaggagca cttggcctgc aggggcaggt cccagccgct	3540
aaaatgggca agggagagcg ggtggagggc cctgaggtgg cagcaggggt cagggaagtg	3600
ggcttccgag tgccctctgt tgaaattgtc accccacagc tgcccgccgt ggaaattgag	3660
gaagggcggc tggagatgat agagacaaaa gtcaagccct cttccaagtt ctccctacct	3720
aagtttggac tctcggggcc aaaggtggct aaggcagagg ctgagggggc tgggcgagct	3780
accaagctga aggtatccaa atttgccatc tctactcccca aggtctgggt gggggctgag	3840
gctgaggcca aaggggctgg ggaggcaggc ctgctgcctg ccctcgatct gtccatccca	3900
cagctcagcc tggatgcccc cctgccctca ggcaaggtag aggtggcagg ggccgacctc	3960
aagttcaagg ggcccaggtt tgctctcccc aagtttgggg tcagaggccg ggacactgag	4020
gcagcagaac tagtgccagg ggtggctgag ttggagggca agggctgggg ctgggatggg	4080
agggtgaaga tgcccaagct gaagatgcct tcctttgggc tggctcgagg gaaggaagca	4140
gaagttcaag gtgatcgtgc cagcccgggg gaaaaggctg agtccaccgc tgtgcagctt	4200
aagatccccg aggtggagct ggtcacgctg ggcgcccagg aggaaggag ggcagagggg	4260
gctgtggccg tcagtggaat gcagctgtca ggcctgaagg tgtccacagc caggcaggtg	4320
gtcactgagg gccatgacgc ggggctgagg atgcctccgc tgggcatctc cctgccacag	4380
gtggagctga ccggctttgg ggaggcaggt accccagggc agcaggctca gagtacagtc	4440
ccttcagcag agggcacagc aggtacagg gttcaggtgc cccaggtgac cctgtctctg	4500
cctggagccc aggttgacagg tggtagactg ctggtgggtg aggggtgtctt taagatgccc	4560
accgtgacag tgccccagct tgagctggac gtgggggctaa gccgagaggc acaggcgggc	4620
gaggcggcca caggcgaggg tgggctgagg ctgaagtgc ccacactggg ggccagagct	4680
agggtggggg gcgagggtgc tgaggagcag cccccagggg ccgagcgta cttctgcctc	4740
tactgcccc acgtggagct ctgccatcc gggggcaacc atgccgagta ccaggtggca	4800
gagggggagg gagaggccgg acacaagctc aagggtacggc tgccccggtt tggcctggtg	4860
cgggccaaagg agggggccga ggagggtgag aaggccaaga gcccctaaact caggctgccc	4920
cgagtgggct tcagccaaag tgagatggtc actggggaag ggtccccag ccccgaggag	4980
gaggaggagg aggaggaaga gggcagtggg gaaggggcct cgggtcgccg gggccgggtc	5040
cgggtccgct tgccacgtgt aggcctggcg gccccttcta aagcctctcg ggggcaggag	5100
ggcgatgcag cccccaagtc ccccgctcaga gagaagtcac ccaagttccg cttccccagg	5160
gtgtccctaa gcccgaaggc ccggagtggg agtggggacc aggaagaggg tggattgcgg	5220



gtgcggctgc ccagcgtggg gttttcagag acaggggctc caggcccggc caggatggag	5280
ggggctcagg ctgcggctgt ctgaagcccc tagtcagatg gggatccctt cttgccttcc	5340
tttctctacc ccctcgctgt tgtgtgtgtg ataactagca ctaaccctaa gagggccggg	5400
aggtgggtga ctgaccaggg ctggcaggga ggctgtctcc tgtctctctg gcaggagtgc	5460
ctgtacccca ccaagccatg tgaataaaat aatctggaag ta	5502

<210> 76  
 <211> 4853  
 <212> DNA  
 <213> Human

<400> 76	
gctctcgagg tgtctggagg ctacgcgagc gccggaccca ggaggcccaa ggagctggag	60
gtgaccctca ggcagcaaga accccacgga agggcgtgag ccctgcagac agctgtgcgg	120
cacctcgggc tgggctcctg ttaggaggaa gtgcctgcac ccaggcagcg gctcagaggc	180
agctgtctca tgcagaactg aagctgggtc tgcagcagaa aggggagagg acacaggagc	240
ctggggtgca ggtgcctccc agcaacgcca tggaggccag gagccggagt gccgaggagc	300
tgaggcgggc ggagttggtg gaaattatcg tggagacgga ggcgcagacc ggggtcagcg	360
gcatcaacgt agcgggcggc ggcaaagagg gaatcttcgt tcgggagctg cgcgaggact	420
caccgcgcgc caggagcctc agcctgcagg aaggggacca gctgctgagt gcccagagtgt	480
tcttcgagaa cttcaagtac gaggacgcac tacgcctgct gcaatgcgcc gagccttaca	540
aagtctcctt ctgcctgaag cgcactgtgc ccaccgggga cctggctctg cggcccggga	600
ccgtgtctgg ctacgagatc aagggcccgc gggccaaggt ggccaagctg aacatccaga	660
gtctgtcccc tgtgaagaag aagaagatgg tgcctggggc tctgggggtc cccgctgacc	720
tggccctgt tgacgtcgag ttctcctttc ccaagttctc ccgcctgcgt cggggcctca	780
aagccgaggc tgtcaagggt cctgtcccgg ctgcccctgc ccgccggcg ctcagctgc	840
ctcggctgcg tgtacgagaa gtggccgaag aggctcaggc agcccggctg gccgccgccg	900
ctcctcccc caggaaagcc aaggtggagg ctgaggtggc tgcaggagct cgtttcacag	960
cccctcaggt ggagctgggt gggccgcggc tgccaggggc ggaggtgggt gtcccccagg	1020
tctcagcccc caaggctgcc ccctcagcag aggcagctgg tggctttgcc ctccacctgc	1080
caacccttgg gctcggagcc ccggctccgc ctgctgtgga ggccccagcc gtgggaatcc	1140
aggtcccca ggtggagctg cctgccttgc cctcactgcc cactctgcc acacttcct	1200
gcctagagac ccgggaagg gctgtgtcgg tagtggtgcc caccctggat gtggcagcac	1260
cgactgtggg ggtggacctg gccttgccgg gtgcagaggt ggaggcccg ggagaggcac	1320

ctgaggtggc cctgaagatg ccccgccctta gttttcccccg atttggggct cgagcaaagg	1380
aagttgctga ggccaaggta gcccaaggta gccctgaggc cagggtgaaa ggtcccagac	1440
ttcgaatgcc cacctttggg ctttccctct tggagccccg gcccgtgtct cctgaagttg	1500
tagagagcaa gctgaagctg cccaccatca agatgccctc ccttggcatc ggagtgtcag	1560
ggccccgaggt caaggtgccc aagggaacctg aagtgaagct cccaaggct cctgaggtca	1620
agcttccaaa agtgcccagag gcagcccttc cagaggttcg actcccagag gtggagctcc	1680
ccaaggtgtc agagatgaaa ctcccaaagg tgccagagat ggctgtgccg gaggtgcggc	1740
ttccagaggt agagctgccc aaagtgtcag agatgaaact ccaaagggtg ccagagatgg	1800
ctgtgccgga ggtgcggctt ccagaggtaac agctgctgaa agtgtcggag atgaaactcc	1860
caaaggtgcc agagatggct gtgccggagg tgcggcttcc agaggtacag ctgccgaaag	1920
tgtcagagat gaaactccca gaggtgtcag aggtggctgt gccagagggtg cggcttccag	1980
aggtgcagct gccgaaagtg ccagagatga aagtccctga gatgaagctt ccaaagggtgc	2040
ctgagatgaa acttcctgag atgaaactcc ctgaagtgc actcccgaag gtgcccgaga	2100
tggccgtgcc cgatgtgcac ctcccagaag tgcagcttcc aaaagtccca gagatgaagc	2160
tccctgagat gaaactccct gaggtgaaac tcccgaagggt gcccgagatg gctgtgcccg	2220
atgtgcacct cccggaagtg cagctcccga aagtcccaga gatgaaactc ctaaaaatgc	2280
ctgagatggc tgtgccagag gttcgactcc ccgagggtgca gctgccaaaa gtctcagaga	2340
tgaaactccc caaggtgcct gaaatggccg tgcccgatgt gcacctccca gaggtgcagc	2400
tgcccaaagt ctgtgaaatg aaagtccctg acatgaagct cccagagata aaactcccca	2460
aggtgcctga gatggctgtg cccgatgtgc acctccccga ggtgcagctg ccgaaagtgt	2520
cagagattcg gctgccgga atgcaagtgc cgaaggttcc cgacgtgcac cttccgaagg	2580
caccagaggt gaagctgccc agggctccgg aggtgcagct aaaggccacc aaggcagaac	2640
aggcagaagg gatggaattt ggcttcaaga tgcccaagat gaccatgccc aagctaggga	2700
gggcagagtc cccatcacgt ggcaagccag gcgaggcggg tgctgaggtc tcagggaagc	2760
tggtaacact tccctgtctg cagccagagg tggatggtga ggctcatgtg ggtgtcccct	2820
ctctcactct gccttcagtg gagctagacc tgccaggagc acttggcctg caggggcagg	2880
tcccagccgc taaaatgggc aaggagagc ggggtggagg ccctgaggtg gcagcagggg	2940
tcagggaagt gggcttccga gtgccctctg ttgaaattgt caccacacag ctgcccgcg	3000
tggaaattga ggaagggcgg ctggagatga tagagacaaa agtcaagccc tcttccaagt	3060
tctccttacc taagtttgga ctctcggggc caaagggtggc taaggcagag gctgaggggg	3120

ctgggcgagc	taccaagctg	aaggtatcca	aatttgccat	ctcactcccc	aaggctcggg	3180
tgggggctga	ggctgaggcc	aaaggggctg	gggaggcagg	cctgctgcct	gccctcgatc	3240
tgtccatccc	acagctcagc	ctggatgccc	acctgccctc	aggcaaggta	gaggtggcag	3300
gggccgacct	caagttcaag	gggccccaggt	ttgctctccc	caagtttggg	gtcagaggcc	3360
gggacactga	ggcagcagaa	ctagtgccag	gggtggctga	gttggagggc	aagggctggg	3420
gctgggatgg	gaggggtgaag	atgcccgaagc	tgaagatgcc	ttcctttggg	ctggctcgag	3480
ggaaggaagc	agaagttcaa	ggtgatcgtg	ccagcccggg	ggaaaaggct	gagtccaccg	3540
ctgtgcagct	taagatcccc	gaggtggagc	tggtcacgct	gggcgcccag	gaggaaggga	3600
gggcagaggg	ggctgtggcc	gtcagtggaa	tgcagctgtc	aggcctgaag	gtgtccacag	3660
ccaggcaggt	ggtcactgag	ggccatgacg	cggggctgag	gatgcctccg	ctgggcatct	3720
ccctgccaca	ggtggagctg	accggctttg	gggaggcagg	taccccaggg	cagcaggctc	3780
agagtacagt	cccttcagca	gagggcacag	caggctacag	ggttcagggtg	ccccagggtga	3840
ccctgtctct	gcctggagcc	caggttgacg	gtggtgagct	gctggtgggt	gaggggtgtct	3900
ttaagatgcc	caccgtgaca	gtgccccagc	ttgagctgga	cgtggggcta	agccgagagg	3960
cacaggcggg	cgaggcgggc	acaggcgagg	gtgggctgag	gctgaagttg	cccacactgg	4020
gggccagagc	taggggtggg	ggcgagggtg	ctgaggagca	gccccagggg	gccgagcgta	4080
ccttctgcct	ctcactgccc	gacgtggagc	tctcgccatc	cgggggcaac	catgccgagt	4140
accagggtggc	agagggggag	ggagaggccg	gacacaagct	caaggtagcg	ctgccccggt	4200
ttggcctgg	gcggggccaag	gagggggccg	aggaggggtga	gaaggccaag	agccccaaac	4260
tcaggctgcc	ccgagtgggc	ttcagccaaa	gtgagatgg	caactggggaa	gggtccccc	4320
gccccgagga	ggaggaggag	gaggaggaag	agggcagtgg	ggaagggggc	tcgggtcgcc	4380
ggggccgggt	ccgggtccgc	ttgccacgtg	taggcctggc	ggccccttct	aaagcctctc	4440
gggggcagga	gggcgatgca	gcccccaagt	ccccgctcag	agagaagtca	cccaagttcc	4500
gcttccccag	ggtgtcccta	agccccaaag	cccggagtgg	gagtggggac	caggaagagg	4560
gtggattg	ggtgcggctg	cccagcgtgg	ggttttcaga	gacaggggct	ccaggcccgg	4620
ccaggatgga	gggggctcag	gctgcggctg	tctgaagccc	ctagttagat	ggggatccct	4680
tcttgccctc	ctttctctac	cccctcgctg	ttgtgtgtgt	gataactagc	actaacccta	4740
agagggccgg	gaggtgggtg	actgaccagg	gctggcaggg	aggcctgctc	ctgtctctct	4800
ggcaggagt	cctgtacccc	accaagccat	gtgaataaaa	taatctggaa	gta	4853

<210> 77

<211> 4641

<212> DNA  
<213> Rat

<400> 77

ggaactctgg aggtgtcttg aggccactg agccccagac ccaggaggcc caagtagctg	60
gaactgaccc tcaggcagca agacctcaaa ggaagagtga aattccggct tacagctgta	120
catcaccccg agtggggctc ctgtcaggag aaaagaccat caccaggaa gcggtcagc	180
ggcagctgct ccatgaggag ctgaagctgg tcctacagca gaaggaggag aggaaacagg	240
agcctgagcc ccaggtgact ctctgcagag ctatggaggc caggagccgc agcgctgagg	300
agctgagacg agcggagttg gtggagatta tcgtggagac agaggcgag accggggctca	360
gcggcttcaa tgtagcaggc ggcggcaaag aaggaatctt tgtccgcgag ctgcgagagg	420
actcacccgc cgccaagagc ctcagtttgc aggaagggga ccaacttctg agcgcccgtg	480
tgttctttga gaacttcaaa tatgaggatg cactacgcct gctgcaatgt gccgagccct	540
acaaggtctc cttctgcttg aagcgcaactg tgcccaccgg ggacctggca ctgcggcccg	600
ggacggtgtc tggatacgag atgaagggcc cgcgggccaa ggtggccaag ctgaacatcc	660
agagtctgtc ccctgtgaag aagaagaaga tggtgattgg gaccctgggg acccctgcag	720
at ttggcccc tgttgacgtc gagttctctt ttcccaagtt ctcccgattg cgtcggggcc	780
ttaaagccga tgctgtcaag ggacctgtcc cagctgcccc tgcccgaaga cgtctccagc	840
tgacctgggt acgtgtccga gaagtagctg aagaggccca ggtagcccga atggctgctg	900
ctgctcctcc ctctaggaag gccaaagtcag aggctgaggt agccacaggg gctggattca	960
cagccccctca gatagagcta gttgggcctc ggctgcctag cgcagagggt ggtgtcccta	1020
aggtctcagt tcccaaggga accccatcaa cagaggcagc cagcggcttt gcccttcacc	1080
tgccaaccct tgggctagga gccccagctg caccggctgt ggagccccca accacaggaa	1140
tccaggtccc gcaagtggaa ctccccacc tgccctcttt accactctg cccacacttc	1200
cgtgcctaga taccaggaa ggggctgcag tggtaaagt cccaccctg gatgtggcag	1260
ctccgtctgt ggaggtggac ctggctttgc caggtgcaga ggtggaggcc caggagagg	1320
tacctgaagt ggctctcaag atgccccgtc tcagtttccc ccgttttggg gttcgaggga	1380
aggaagctac tgaagccaag gtagtcaagg gcagccctga ggccaaagca aagggtccca	1440
gacttcgaat gccaccttt gggctttctc tcctggaatc ccggccctct ggccctgaag	1500
ttgctgctga gagcaagctg aagctacca ccctcaagat gccctctttc ggcatcagcg	1560
tagctgggcc tgaggtcaag gcacccaaag ggcctgaagt gaagctcccc aaagtccctg	1620
agatcaaact cccgaaagcg ccagaggcag ccattccaga tgtgcaact cccgaggtac	1680
agctgcccga aatgtcagac atgaaacttc caaagatccc tgagatggct gtaccgatg	1740

ttcaccttcc	ggaagtgaag	ctgccccaaag	tccccgagat	gaaagtccca	gaaatgaagc	1800
ttccgaagat	cccggagatg	gccgtgcctg	atgtacacct	tccagatata	cagctcccga	1860
aagttcccga	gatgaagctc	ccagacatga	agctccccga	ggtgcctgag	atggccgtgc	1920
ctgatgtaca	ccttccagat	atacagctcc	cgaaagttcc	cgagatgaag	ctcccagaca	1980
tgaagctccc	gaaggtgcct	gagatggccg	tgcctgatgt	acgaattccg	gaagttcagc	2040
tacccaaagt	gtccgaggtg	aagctcccga	agataccgga	catggccgtg	cctgatgttc	2100
gcctcccaga	gctgcaactg	cccaaaatgt	ctgaggtgaa	gctcccgaag	ataccggaca	2160
tggccgtacc	tgatgttcgc	ctcccagaag	ttcagctacc	caaagtgtca	gagctgaagc	2220
tcccgaaggt	gcctgagatg	accatgcccg	acattcgcct	cccggaagtt	cagctgccc	2280
aagtgctga	cattaaactt	ccagaaataa	aactcccca	agtgctgag	atggccgtgc	2340
ctgatgtccc	ccttccagaa	ctacagctgc	ccaaagtgcc	acaggtccca	gacgtgcatc	2400
ttcccaaagt	gccagagatg	aagttgccc	aggttcctga	ggcacagagg	aaatctgcag	2460
gggcgagca	ggcagaaaag	accgaattta	gcttcaagtt	gccaagatg	actgtgccc	2520
agttggggaa	agtgaccaag	cctggggagg	caggtattga	ggttccagac	aaactcctga	2580
tacttcctg	tctgcagcca	gaggtgggca	ctgaggtggc	ccgtgttgg	gtcccttccc	2640
tctctctccc	ttctgtggag	cttgacttgc	ctggggccct	gggcctggag	ggacaagtcc	2700
aagaagctgt	ctctggcaaa	gtggagaagc	cagagggccc	caggggtggc	gtagggactg	2760
gagaggcggg	cttcgcgtg	ccctctgtgg	agattgtcaa	tcctcagctg	cccacggttg	2820
aagtcaagaa	agagcagcta	gagatggtgg	agatgaaagt	caaaccact	tccaagttct	2880
ctctgccc	atttgactt	tcagggccc	aagctgtcaa	ggcagaggtg	gaggggctg	2940
ggcgagccac	caagctgaag	gtatccaagt	ttgccatctc	gcttcccaga	gctcgagcag	3000
ggactgacgc	ggacgcgaag	ggagctgggg	aagcggggtt	gctgcctgcc	ctcgatctgt	3060
ccatcccaca	gctcagcctg	gatgctcaac	tgccctcagg	caaggtggag	gtagcagggg	3120
ctgagagcaa	gcctaaaggg	tccagatttg	ctctgccc	gtttggggcg	aaaggccggg	3180
actctgaagc	cgacgtactg	gtggcagggg	aggctgagct	ggaggggaag	ggttggggct	3240
gggacgggaa	ggtgaagatg	ccaagctga	agatgccatc	ttttgggctg	tcccaggaa	3300
aagaagcaga	aattcaggat	gggcgtgtca	gcccaggaga	aaagctggaa	gccatagctg	3360
ggcagcttaa	gatccctgag	gtggaactgg	tcacaccagg	agctcaggag	acagagaagg	3420
tcaccagtgg	agtgaagcca	tcaggcctcc	agggtgtccac	cactaggcag	gtggttgag	3480
agggccagga	gggggcgcag	agggtgtcct	cattaggtat	ctctttgccc	caggtggaac	3540

tggccagctt tggggaggca ggccttgaga tcgcagcccc atctgcagag ggcacagtag 3600  
 gctctaggat ccaggtgcca caggtgatgc tggagttgcc gggaaccag gtggcagggg 3660  
 gtgatctgtt agtgggtgag ggcattctca agatgccac agtgacagtg cccagtttag 3720  
 agctggatgt ggggttgggc catgaagccc aggctggtga aacagccaag agtgagggcg 3780  
 ggtaaagct gaagttgccc aactggggg caggaggcaa aggagagggg gctgaggccc 3840  
 agagccccga ggcccagcac accttcaca tctcattgcc tgacgtagaa ctcacatcac 3900  
 cagtgagtag ccacgctgag taccaggtgg ttgagggcga tggggatggc gggcacaaac 3960  
 tcaaggtgcg gctgcccctg tttggtctgg caagggccaa ggaaggaata gaaactggag 4020  
 aaaaggttaa aagtccaaag ctcaggctac cccgagtggg cttcagccaa agtgagtcgg 4080  
 cctctggaga aggctctccc agtcctgagg aggaggaaga aggcagtggg gaaggggctt 4140  
 ccggtcgccg tggtcgggtc agggctcgct tgcctcgtgt aggcttggct tccccttcta 4200  
 aaggctctaa gggacaggag ggtgatgcgg cctccaagtc cccagttggg gagaagtccc 4260  
 ccaagttccg ctttcttagg gtgtccttaa gcccgaaggc ccggagtggg agtaaggacc 4320  
 gggaagaagg tggattcagg gtccgactgc ccagtgtggg attttcagaa acagcagctc 4380  
 caggctccgc caggattgag gggaccagc ctgctgccat ctgaagccct gggacagctg 4440  
 tggattcccc ctcttgtctt cccatcccca tccctgctcc ccattttatg tgtgacatta 4500  
 ctgactacta tctcagagg gcttgaaggt gggcagctga ctcaggcagg agcggctctgt 4560  
 gccacctcat tggctgacgt gcctgtatat catgccaagc tctgtgaata aaataattca 4620  
 aaagttaaaa aaaaaaaaaa a 4641

<210> 78  
 <211> 370  
 <212> PRT  
 <213> Arabidopsisthaliana

<400> 78

Met Ala Leu Met Lys Lys Ser Leu Ser Ala Ala Leu Leu Ser Ser Pro  
 1 5 10 15

Leu Leu Ile Ile Cys Leu Ile Ala Leu Leu Ala Asp Pro Phe Ser Val  
 20 25 30

Gly Ala Arg Arg Leu Leu Glu Asp Pro Lys Pro Glu Ile Pro Lys Leu  
 35 40 45

Pro Glu Leu Pro Lys Phe Glu Val Pro Lys Leu Pro Glu Phe Pro Lys  
 50 55 60

Pro Glu Leu Pro Lys Leu Pro Glu Phe Pro Lys Pro Glu Leu Pro Lys  
65 70 75 80

Ile Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Pro  
85 90 95

Lys Pro Glu Glu Thr Lys Leu Pro Asp Ile Pro Lys Leu Glu Leu Pro  
100 105 110

Lys Phe Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Met Pro Glu Ile  
115 120 125

Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu  
130 135 140

Pro Lys Met Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Phe Pro Glu  
145 150 155 160

Ile Pro Lys Pro Asp Leu Pro Lys Phe Pro Glu Asn Ser Lys Pro Glu  
165 170 175

Val Pro Lys Leu Met Glu Thr Glu Lys Pro Glu Ala Pro Lys Val Pro  
180 185 190

Glu Ile Pro Lys Pro Glu Leu Pro Lys Leu Pro Glu Val Pro Lys Leu  
195 200 205

Glu Ala Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys Met  
210 215 220

Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys  
225 230 235 240

Leu Pro Glu Val Pro Lys Leu Glu Ala Pro Lys Val Pro Glu Ile Gln  
245 250 255

Lys Pro Glu Leu Pro Lys Met Pro Glu Leu Pro Lys Met Pro Glu Ile  
260 265 270

Gln Lys Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu  
275 280 285

Pro Lys Val Pro Glu Val Pro Lys Pro Glu Leu Pro Thr Val Pro Glu  
290 295 300

Val Pro Lys Ser Glu Ala Pro Lys Phe Pro Glu Ile Pro Lys Pro Glu  
305 310 315 320

Leu Pro Lys Ile Pro Glu Val Pro Lys Pro Glu Leu Pro Lys Val Pro  
325 330 335

Glu Ile Thr Lys Pro Ala Val Pro Glu Ile Pro Lys Pro Glu Leu Pro  
340 345 350

Thr Met Pro Gln Leu Pro Lys Leu Pro Glu Phe Pro Lys Val Pro Gly  
355 360 365

Thr Pro  
370

<210> 79  
<211> 1389  
<212> PRT  
<213> Rat

<400> 79

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn  
115 120 125

Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Ile Gly Thr  
130 135 140



Leu Gly Thr Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe  
145 150 155 160

Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Asp Ala Val Lys  
165 170 175

Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg  
180 185 190

Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Val Ala Arg Met Ala  
195 200 205

Ala Ala Ala Pro Pro Ser Arg Lys Ala Lys Ser Glu Ala Glu Val Ala  
210 215 220

Thr Gly Ala Gly Phe Thr Ala Pro Gln Ile Glu Leu Val Gly Pro Arg  
225 230 235 240

Leu Pro Ser Ala Glu Val Gly Val Pro Lys Val Ser Val Pro Lys Gly  
245 250 255

Thr Pro Ser Thr Glu Ala Ala Ser Gly Phe Ala Leu His Leu Pro Thr  
260 265 270

Leu Gly Leu Gly Ala Pro Ala Ala Pro Ala Val Glu Pro Pro Thr Thr  
275 280 285

Gly Ile Gln Val Pro Gln Val Glu Leu Pro Thr Leu Pro Ser Leu Pro  
290 295 300

Thr Leu Pro Thr Leu Pro Cys Leu Asp Thr Gln Glu Gly Ala Ala Val  
305 310 315 320

Val Lys Val Pro Thr Leu Asp Val Ala Ala Pro Ser Val Glu Val Asp  
325 330 335

Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Gln Gly Glu Val Pro Glu  
340 345 350

Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Val Arg  
355 360 365

Gly Lys Glu Ala Thr Glu Ala Lys Val Val Lys Gly Ser Pro Glu Ala  
370 375 380

Lys Ala Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu  
 385 390 395 400

Leu Glu Ser Arg Pro Ser Gly Pro Glu Val Ala Ala Glu Ser Lys Leu  
 405 410 415

Lys Leu Pro Thr Leu Lys Met Pro Ser Phe Gly Ile Ser Val Ala Gly  
 420 425 430

Pro Glu Val Lys Ala Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Val  
 435 440 445

Pro Glu Ile Lys Leu Pro Lys Ala Pro Glu Ala Ala Ile Pro Asp Val  
 450 455 460

Gln Leu Pro Glu Val Gln Leu Pro Lys Met Ser Asp Met Lys Leu Pro  
 465 470 475 480

Lys Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Lys  
 485 490 495

Leu Pro Lys Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys  
 500 505 510

Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu  
 515 520 525

Pro Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val  
 530 535 540

Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu Pro  
 545 550 555 560

Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val Pro  
 565 570 575

Glu Met Ala Val Pro Asp Val Arg Ile Pro Glu Val Gln Leu Pro Lys  
 580 585 590

Val Ser Glu Val Lys Leu Pro Lys Ile Pro Asp Met Ala Val Pro Asp  
 595 600 605

Val Arg Leu Pro Glu Leu Gln Leu Pro Lys Met Ser Glu Val Lys Leu  
 610 615 620

Pro Lys Ile Pro Asp Met Ala Val Pro Asp Val Arg Leu Pro Glu Val  
625 630 635 640

Gln Leu Pro Lys Val Ser Glu Leu Lys Leu Pro Lys Val Pro Glu Met  
645 650 655

Thr Met Pro Asp Ile Arg Leu Pro Glu Val Gln Leu Pro Lys Val Pro  
660 665 670

Asp Ile Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala  
675 680 685

Val Pro Asp Val Pro Leu Pro Glu Leu Gln Leu Pro Lys Val Pro Gln  
690 695 700

Val Pro Asp Val His Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys  
705 710 715 720

Val Pro Glu Ala Gln Arg Lys Ser Ala Gly Ala Glu Gln Ala Glu Lys  
725 730 735

Thr Glu Phe Ser Phe Lys Leu Pro Lys Met Thr Val Pro Lys Leu Gly  
740 745 750

Lys Val Thr Lys Pro Gly Glu Ala Gly Ile Glu Val Pro Asp Lys Leu  
755 760 765

Leu Ile Leu Pro Cys Leu Gln Pro Glu Val Gly Thr Glu Val Ala Arg  
770 775 780

Val Gly Val Pro Ser Leu Ser Leu Pro Ser Val Glu Leu Asp Leu Pro  
785 790 795 800

Gly Ala Leu Gly Leu Glu Gly Gln Val Gln Glu Ala Val Ser Gly Lys  
805 810 815

Val Glu Lys Pro Glu Gly Pro Arg Val Ala Val Gly Thr Gly Glu Ala  
820 825 830

Gly Phe Arg Val Pro Ser Val Glu Ile Val Asn Pro Gln Leu Pro Thr  
835 840 845

Val Glu Val Lys Lys Glu Gln Leu Glu Met Val Glu Met Lys Val Lys  
850 855 860

Pro Thr Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys

865		870		875		880
Ala Val Lys Ala Glu Val Glu Gly Pro Gly Arg Ala Thr Lys Leu Lys						
	885			890		895
Val Ser Lys Phe Ala Ile Ser Leu Pro Arg Ala Arg Ala Gly Thr Asp						
	900			905		910
Ala Asp Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp						
	915			920		925
Leu Ser Ile Pro Gln Leu Ser Leu Asp Ala Gln Leu Pro Ser Gly Lys						
	930			935		940
Val Glu Val Ala Gly Ala Glu Ser Lys Pro Lys Gly Ser Arg Phe Ala						
945		950		955		960
Leu Pro Lys Phe Gly Ala Lys Gly Arg Asp Ser Glu Ala Asp Val Leu						
	965			970		975
Val Ala Gly Glu Ala Glu Leu Glu Gly Lys Gly Trp Gly Trp Asp Gly						
	980			985		990
Lys Val Lys Met Pro Lys Leu Lys Met Pro Ser Phe Gly Leu Ser Arg						
	995			1000		1005
Gly Lys Glu Ala Glu Ile Gln Asp Gly Arg Val Ser Pro Gly Glu						
1010				1015		1020
Lys Leu Glu Ala Ile Ala Gly Gln Leu Lys Ile Pro Glu Val Glu						
1025				1030		1035
Leu Val Thr Pro Gly Ala Gln Glu Thr Glu Lys Val Thr Ser Gly						
1040				1045		1050
Val Lys Pro Ser Gly Leu Gln Val Ser Thr Thr Arg Gln Val Val						
1055				1060		1065
Ala Glu Gly Gln Glu Gly Ala Gln Arg Val Ser Ser Leu Gly Ile						
1070				1075		1080
Ser Leu Pro Gln Val Glu Leu Ala Ser Phe Gly Glu Ala Gly Pro						
1085				1090		1095
Glu Ile Ala Ala Pro Ser Ala Glu Gly Thr Val Gly Ser Arg Ile						
1100				1105		1110

Gln Val	Pro Gln Val Met	Leu	Glu Leu Pro Gly Thr	Gln Val Ala
1115		1120		1125
Gly Gly	Asp Leu Leu Val	Gly	Glu Gly Ile Phe Lys	Met Pro Thr
1130		1135		1140
Val Thr	Val Pro Gln Leu	Glu	Leu Asp Val Gly	Leu Gly His Glu
1145		1150		1155
Ala Gln	Ala Gly Glu Thr	Ala	Lys Ser Glu Gly	Gly Leu Lys Leu
1160		1165		1170
Lys Leu	Pro Thr Leu Gly	Ala	Gly Gly Lys Gly	Glu Gly Ala Glu
1175		1180		1185
Ala Gln	Ser Pro Glu Ala	Gln	His Thr Phe His	Ile Ser Leu Pro
1190		1195		1200
Asp Val	Glu Leu Thr Ser	Pro	Val Ser Ser His	Ala Glu Tyr Gln
1205		1210		1215
Val Val	Glu Gly Asp Gly	Asp	Gly Gly His Lys	Leu Lys Val Arg
1220		1225		1230
Leu Pro	Leu Phe Gly Leu	Ala	Arg Ala Lys Glu	Gly Ile Glu Thr
1235		1240		1245
Gly Glu	Lys Val Lys Ser	Pro	Lys Leu Arg Leu	Pro Arg Val Gly
1250		1255		1260
Phe Ser	Gln Ser Glu Ser	Ala	Ser Gly Glu Gly	Ser Pro Ser Pro
1265		1270		1275
Glu Glu	Glu Glu Glu Gly	Ser	Gly Glu Gly Ala	Ser Gly Arg Arg
1280		1285		1290
Gly Arg	Val Arg Val Arg	Leu	Pro Arg Val Gly	Leu Ala Ser Pro
1295		1300		1305
Ser Lys	Gly Ser Lys Gly	Gln	Glu Gly Asp Ala	Ala Ser Lys Ser
1310		1315		1320
Pro Val	Gly Glu Lys Ser	Pro	Lys Phe Arg Phe	Pro Arg Val Ser
1325		1330		1335

Leu Ser Pro Lys Ala Arg Ser Gly Ser Lys Asp Arg Glu Glu Gly  
1340 1345 1350

Gly Phe Arg Val Arg Leu Pro Ser Val Gly Pro Thr Ala Gln Cys  
1355 1360 1365

Gly Ile Phe Arg Asn Ser Ser Ser Ser Ser Ala Arg Ile Glu Gly  
1370 1375 1380

Thr Gln Ala Ala Ala Ile  
1385

<210> 80  
<211> 148  
<212> PRT  
<213> Mouse

<400> 80

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Val  
115 120 125

Arg Val Leu Ser Pro Val Pro Val Gln Asp Ser Pro Ser Asp Arg Val  
130 135 140

Ala Ala Ala Pro

145

<210> 81  
<211> 377  
<212> PRT  
<213> Caenorhabditiselegans

<400> 81

Met Ser Val Phe Arg Phe Leu Leu Phe Leu Ser Leu Leu Val Gly Ser  
1 5 10 15

Asn Ala Phe Val Lys Pro Gln Tyr Asn Val Thr Gly Gln Ile Asp Ser  
20 25 30

Ala Leu Gln Arg Phe Phe Gly Ile Thr Leu Pro Ser Leu Lys Ile Pro  
35 40 45

Asp Leu Leu Asn Pro Asp Lys Lys Arg Asn Pro Pro Ser Val Gly Gln  
50 55 60

Leu Lys Lys Thr Ser Phe Pro Leu Cys Asn Val Asn Leu Pro Pro Ile  
65 70 75 80

Phe Phe Thr Ile Ser Leu Phe Arg Ile Lys Leu Pro Asn Leu Ile Pro  
85 90 95

Thr Ala Leu Pro Val Ile Lys Leu Pro Thr Ile Lys Ile Pro Asn Ile  
100 105 110

Leu Pro Thr Leu Pro Thr Ile Lys Val Pro Thr Ile Lys Ile Pro Asp  
115 120 125

Ile Ile Pro Ile Thr Leu Pro Thr Ile Lys Ile Pro Glu Val Val Pro  
130 135 140

Thr Asn Leu Pro Thr Val Glu Ile Pro His Phe Ile Pro Lys Thr Leu  
145 150 155 160

Pro Thr Val Lys Ile Pro Asn Ile Ile Pro Thr Asn Phe Pro Thr Ile  
165 170 175

Glu Thr Pro Asp Ile Ile Pro Lys Ile Leu Pro Thr Ile Lys Ile Pro  
180 185 190

Glu Ile Ile Pro Leu Thr Leu Pro Thr Val Lys Ile Pro Asp Ile Ile  
195 200 205

Pro Ile Thr Leu Pro Thr Ile Lys Ile Pro Glu Ile Val Pro Thr Lys  
 210 215 220

Leu Pro Thr Val Glu Val Pro Asp Thr Ile Pro Lys Thr Leu Pro Thr  
 225 230 235 240

Thr Lys Ile Pro Asp Ile Val Pro Ile Thr Ser Pro Thr Val Lys Ile  
 245 250 255

Pro Gln Ile Ile Pro Thr Ile Lys Ile Pro Asp Ile Ile Pro Lys Asn  
 260 265 270

Leu Ser Thr Leu Gly Pro Ile Lys Leu Pro Thr Ile Lys Leu Pro Thr  
 275 280 285

Gly Asn Met Val Cys Asp Ile Cys Glu Lys Val Ile Gly Val Leu Thr  
 290 295 300

Thr Arg Leu Leu Glu Ile Ile Gln Lys Phe Arg Val Glu Ala Asp Lys  
 305 310 315 320

Phe Leu Thr Lys Leu Cys Thr Ser Leu Thr Ser Asn Pro Lys Thr Leu  
 325 330 335

Thr Val Gly Thr Met Cys Val Met Phe Lys Gly Asn Ile Met Asp Thr  
 340 345 350

Ile Phe Lys Gly Phe Asp Gly Leu Lys Lys Asn Leu Glu Pro Val Ser  
 355 360 365

Phe Cys Lys His Val Pro Phe Cys Lys  
 370 375

<210> 82  
 <211> 1383  
 <212> PRT  
 <213> Rat

<400> 82

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
 1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
 20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg



35	40	45
Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln 50 55 60		
Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala 65 70 75 80		
Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu 85 90 95		
Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val 100 105 110		
Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn 115 120 125		
Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Ile Gly Thr 130 135 140		
Leu Gly Thr Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe 145 150 155 160		
Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Asp Ala Val Lys 165 170 175		
Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg 180 185 190		
Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Val Ala Arg Met Ala 195 200 205		
Ala Ala Ala Pro Pro Ser Arg Lys Ala Lys Ser Glu Ala Glu Val Ala 210 215 220		
Thr Gly Ala Gly Phe Thr Ala Pro Gln Ile Glu Leu Val Gly Pro Arg 225 230 235 240		
Leu Pro Ser Ala Glu Val Gly Val Pro Lys Val Ser Val Pro Lys Gly 245 250 255		
Thr Pro Ser Thr Glu Ala Ala Ser Gly Phe Ala Leu His Leu Pro Thr 260 265 270		
Leu Gly Leu Gly Ala Pro Ala Ala Pro Ala Val Glu Pro Pro Thr Thr 275 280 285		

Gly Ile Gln Val Pro Gln Val Glu Leu Pro Thr Leu Pro Ser Leu Pro  
290 295 300

Thr Leu Pro Thr Leu Pro Cys Leu Asp Thr Gln Glu Gly Ala Ala Val  
305 310 315 320

Val Lys Val Pro Thr Leu Asp Val Ala Ala Pro Ser Val Glu Val Asp  
325 330 335

Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Gln Gly Glu Val Pro Glu  
340 345 350

Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Val Arg  
355 360 365

Gly Lys Glu Ala Thr Glu Ala Lys Val Val Lys Gly Ser Pro Glu Ala  
370 375 380

Lys Ala Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu  
385 390 395 400

Leu Glu Ser Arg Pro Ser Gly Pro Glu Val Ala Ala Glu Ser Lys Leu  
405 410 415

Lys Leu Pro Thr Leu Lys Met Pro Ser Phe Gly Ile Ser Val Ala Gly  
420 425 430

Pro Glu Val Lys Ala Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Val  
435 440 445

Pro Glu Ile Lys Leu Pro Lys Ala Pro Glu Ala Ala Ile Pro Asp Val  
450 455 460

Gln Leu Pro Glu Val Gln Leu Pro Lys Met Ser Asp Met Lys Leu Pro  
465 470 475 480

Lys Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Lys  
485 490 495

Leu Pro Lys Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys  
500 505 510

Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu  
515 520 525

Pro Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val  
530 535 540

Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu Pro  
545 550 555 560

Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val Pro  
565 570 575

Glu Met Ala Val Pro Asp Val Arg Ile Pro Glu Val Gln Leu Pro Lys  
580 585 590

Val Ser Glu Val Lys Leu Pro Lys Ile Pro Asp Met Ala Val Pro Asp  
595 600 605

Val Arg Leu Pro Glu Leu Gln Leu Pro Lys Met Ser Glu Val Lys Leu  
610 615 620

Pro Lys Ile Pro Asp Met Ala Val Pro Asp Val Arg Leu Pro Glu Val  
625 630 635 640

Gln Leu Pro Lys Val Ser Glu Leu Lys Leu Pro Lys Val Pro Glu Met  
645 650 655

Thr Met Pro Asp Ile Arg Leu Pro Glu Val Gln Leu Pro Lys Val Pro  
660 665 670

Asp Ile Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala  
675 680 685

Val Pro Asp Val Pro Leu Pro Glu Leu Gln Leu Pro Lys Val Pro Gln  
690 695 700

Val Pro Asp Val His Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys  
705 710 715 720

Val Pro Glu Ala Gln Arg Lys Ser Ala Gly Ala Glu Gln Ala Glu Lys  
725 730 735

Thr Glu Phe Ser Phe Lys Leu Pro Lys Met Thr Val Pro Lys Leu Gly  
740 745 750

Lys Val Thr Lys Pro Gly Glu Ala Gly Ile Glu Val Pro Asp Lys Leu  
755 760 765

Leu Ile Leu Pro Cys Leu Gln Pro Glu Val Gly Thr Glu Val Ala Arg  
770 775 780

Val Gly Val Pro Ser Leu Ser Leu Pro Ser Val Glu Leu Asp Leu Pro  
785 790 795 800

Gly Ala Leu Gly Leu Glu Gly Gln Val Gln Glu Ala Val Ser Gly Lys  
805 810 815

Val Glu Lys Pro Glu Gly Pro Arg Val Ala Val Gly Thr Gly Glu Ala  
820 825 830

Gly Phe Arg Val Pro Ser Val Glu Ile Val Asn Pro Gln Leu Pro Thr  
835 840 845

Val Glu Val Lys Lys Glu Gln Leu Glu Met Val Glu Met Lys Val Lys  
850 855 860

Pro Thr Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys  
865 870 875 880

Ala Val Lys Ala Glu Val Glu Gly Pro Gly Arg Ala Thr Lys Leu Lys  
885 890 895

Val Ser Lys Phe Ala Ile Ser Leu Pro Arg Ala Arg Ala Gly Thr Asp  
900 905 910

Ala Asp Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp  
915 920 925

Leu Ser Ile Pro Gln Leu Ser Leu Asp Ala Gln Leu Pro Ser Gly Lys  
930 935 940

Val Glu Val Ala Gly Ala Glu Ser Lys Pro Lys Gly Ser Arg Phe Ala  
945 950 955 960

Leu Pro Lys Phe Gly Ala Lys Gly Arg Asp Ser Glu Ala Asp Val Leu  
965 970 975

Val Ala Gly Glu Ala Glu Leu Glu Gly Lys Gly Trp Gly Trp Asp Gly  
980 985 990

Lys Val Lys Met Pro Lys Leu Lys Met Pro Ser Phe Gly Leu Ser Arg  
995 1000 1005

Gly Lys Glu Ala Glu Ile Gln Asp Gly Arg Val Ser Pro Gly Glu

1010		1015		1020
Lys Leu Glu Ala Ile Ala Gly Gln Leu Lys Ile Pro Glu Val Glu				
1025		1030		1035
Leu Val Thr Pro Gly Ala Gln Glu Thr Glu Lys Val Thr Ser Gly				
1040		1045		1050
Val Lys Pro Ser Gly Leu Gln Val Ser Thr Thr Arg Gln Val Val				
1055		1060		1065
Ala Glu Gly Gln Glu Gly Ala Gln Arg Val Ser Ser Leu Gly Ile				
1070		1075		1080
Ser Leu Pro Gln Val Glu Leu Ala Ser Phe Gly Glu Ala Gly Pro				
1085		1090		1095
Glu Ile Ala Ala Pro Ser Ala Glu Gly Thr Val Gly Ser Arg Ile				
1100		1105		1110
Gln Val Pro Gln Val Met Leu Glu Leu Pro Gly Thr Gln Val Ala				
1115		1120		1125
Gly Gly Asp Leu Leu Val Gly Glu Gly Ile Phe Lys Met Pro Thr				
1130		1135		1140
Val Thr Val Pro Gln Leu Glu Leu Asp Val Gly Leu Gly His Glu				
1145		1150		1155
Ala Gln Ala Gly Glu Thr Ala Lys Ser Glu Gly Gly Leu Lys Leu				
1160		1165		1170
Lys Leu Pro Thr Leu Gly Ala Gly Gly Lys Gly Glu Gly Ala Glu				
1175		1180		1185
Ala Gln Ser Pro Glu Ala Gln His Thr Phe His Ile Ser Leu Pro				
1190		1195		1200
Asp Val Glu Leu Thr Ser Pro Val Ser Ser His Ala Glu Tyr Gln				
1205		1210		1215
Val Val Glu Gly Asp Gly Asp Gly Gly His Lys Leu Lys Val Arg				
1220		1225		1230
Leu Pro Leu Phe Gly Leu Ala Arg Ala Lys Glu Gly Ile Glu Thr				
1235		1240		1245

Gly Glu Lys Val Lys Ser Pro Lys Leu Arg Leu Pro Arg Val Gly  
 1250 1255 1260

Phe Ser Gln Ser Glu Ser Ala Ser Gly Glu Gly Ser Pro Ser Pro  
 1265 1270 1275

Glu Glu Glu Glu Glu Gly Ser Gly Glu Gly Ala Ser Gly Arg Arg  
 1280 1285 1290

Gly Arg Val Arg Val Arg Leu Pro Arg Val Gly Leu Ala Ser Pro  
 1295 1300 1305

Ser Lys Gly Ser Lys Gly Gln Glu Gly Asp Ala Ala Ser Lys Ser  
 1310 1315 1320

Pro Val Gly Glu Lys Ser Pro Lys Phe Arg Phe Pro Arg Val Ser  
 1325 1330 1335

Leu Ser Pro Lys Ala Arg Ser Gly Ser Lys Asp Arg Glu Glu Gly  
 1340 1345 1350

Gly Phe Arg Val Arg Leu Pro Ser Val Gly Phe Ser Glu Thr Ala  
 1355 1360 1365

Ala Pro Gly Ser Ala Arg Ile Glu Gly Thr Gln Ala Ala Ala Ile  
 1370 1375 1380

<210> 83  
 <211> 370  
 <212> PRT  
 <213> Arabidopsisthaliana

<400> 83

Met Ala Leu Met Lys Lys Ser Leu Ser Ala Ala Leu Leu Ser Ser Pro  
 1 5 10 15

Leu Leu Ile Ile Cys Leu Ile Ala Leu Leu Ala Asp Pro Phe Ser Val  
 20 25 30

Gly Ala Arg Arg Leu Leu Glu Asp Pro Lys Pro Glu Ile Pro Lys Leu  
 35 40 45

Pro Glu Leu Pro Lys Phe Glu Val Pro Lys Leu Pro Glu Phe Pro Lys  
 50 55 60

Pro Glu Leu Pro Lys Leu Pro Glu Phe Pro Lys Pro Glu Leu Pro Lys  
65 70 75 80

Ile Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Pro  
85 90 95

Lys Pro Glu Glu Thr Lys Leu Pro Asp Ile Pro Lys Leu Glu Leu Pro  
100 105 110

Lys Phe Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Met Pro Glu Ile  
115 120 125

Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu  
130 135 140

Pro Lys Met Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Phe Pro Glu  
145 150 155 160

Ile Pro Lys Pro Asp Leu Pro Lys Phe Pro Glu Asn Ser Lys Pro Glu  
165 170 175

Val Pro Lys Leu Met Glu Thr Glu Lys Pro Glu Ala Pro Lys Val Pro  
180 185 190

Glu Ile Pro Lys Pro Glu Leu Pro Lys Leu Pro Glu Val Pro Lys Leu  
195 200 205

Glu Ala Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys Met  
210 215 220

Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys  
225 230 235 240

Leu Pro Glu Val Pro Lys Leu Glu Ala Pro Lys Val Pro Glu Ile Gln  
245 250 255

Lys Pro Glu Leu Pro Lys Met Pro Glu Leu Pro Lys Met Pro Glu Ile  
260 265 270

Gln Lys Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu  
275 280 285

Pro Lys Val Pro Glu Val Pro Lys Pro Glu Leu Pro Thr Val Pro Glu  
290 295 300

Val Pro Lys Ser Glu Ala Pro Lys Phe Pro Glu Ile Pro Lys Pro Glu

305                      310                      315                      320  
 Leu Pro Lys Ile Pro Glu Val Pro Lys Pro Glu Leu Pro Lys Val Pro  
                                  325                                   330                                   335  
 Glu Ile Thr Lys Pro Ala Val Pro Glu Ile Pro Lys Pro Glu Leu Pro  
                                  340                                   345                                   350  
 Thr Met Pro Gln Leu Pro Lys Leu Pro Glu Phe Pro Lys Val Pro Gly  
                                  355                                   360                                   365  
 Thr Pro  
          370  
  
 <210> 84  
 <211> 148  
 <212> PRT  
 <213> Mouse  
  
 <400> 84  
 Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
 1                                   5                                   10                                   15  
 Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
                                  20                                   25                                   30  
 Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
                                  35                                   40                                   45  
 Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
                                  50                                   55                                   60  
 Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
 65                                   70                                   75                                   80  
 Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
                                  85                                   90                                   95  
 Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
                                  100                                   105                                   110  
 Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Val  
                                  115                                   120                                   125  
 Arg Val Leu Ser Pro Val Pro Val Gln Asp Ser Pro Ser Asp Arg Val  
                                  130                                   135                                   140



Ala Ala Ala Pro  
145

<210> 85  
<211> 1391  
<212> PRT  
<213> Mouse

<400> 85

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn  
115 120 125

Ile Gln Ser Leu Ala Pro Val Lys Lys Lys Lys Met Val Thr Gly Ala  
130 135 140

Leu Gly Thr Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe  
145 150 155 160

Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Glu Ala Val Lys  
165 170 175

Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg  
180 185 190

Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Val Ala Arg Met Ala

195		200		205											
Ala	Ala	Ala	Pro	Pro	Pro	Arg	Lys	Ala	Lys	Ala	Glu	Ala	Glu	Ala	Ala
210						215					220				
Thr	Gly	Ala	Gly	Phe	Thr	Ala	Pro	Gln	Ile	Glu	Leu	Val	Gly	Pro	Arg
225					230					235					240
Leu	Pro	Ser	Ala	Glu	Val	Gly	Val	Pro	Gln	Val	Ser	Val	Pro	Lys	Gly
				245					250					255	
Thr	Pro	Ser	Thr	Glu	Ala	Ala	Ser	Gly	Phe	Ala	Leu	His	Leu	Pro	Thr
			260					265					270		
Leu	Gly	Leu	Gly	Ala	Pro	Ala	Ala	Pro	Ala	Val	Glu	Pro	Pro	Ala	Thr
	275						280					285			
Gly	Ile	Gln	Val	Pro	Gln	Val	Glu	Leu	Pro	Thr	Leu	Pro	Ser	Leu	Pro
290						295					300				
Thr	Leu	Pro	Thr	Leu	Pro	Cys	Leu	Asp	Thr	Gln	Glu	Gly	Ala	Ala	Val
305					310					315					320
Val	Lys	Val	Pro	Thr	Leu	Asp	Val	Ala	Ala	Pro	Ser	Met	Gly	Val	Asp
				325					330					335	
Leu	Ala	Leu	Pro	Gly	Ala	Glu	Val	Glu	Ala	Gln	Gly	Glu	Val	Pro	Glu
			340					345					350		
Val	Ala	Leu	Lys	Met	Pro	Arg	Leu	Ser	Phe	Pro	Arg	Phe	Gly	Ile	Arg
	355						360					365			
Gly	Lys	Glu	Ala	Thr	Glu	Ala	Lys	Val	Val	Lys	Gly	Ser	Pro	Glu	Ala
370						375					380				
Lys	Ala	Lys	Gly	Pro	Arg	Leu	Arg	Met	Pro	Thr	Phe	Gly	Leu	Ser	Leu
385					390					395					400
Leu	Glu	Pro	Arg	Pro	Ser	Gly	Pro	Glu	Ala	Val	Ala	Glu	Ser	Lys	Leu
				405					410					415	
Lys	Leu	Pro	Thr	Leu	Lys	Met	Pro	Ser	Phe	Gly	Ile	Gly	Val	Ala	Gly
			420					425					430		
Pro	Glu	Val	Lys	Ala	Pro	Thr	Gly	Pro	Glu	Val	Lys	Leu	Pro	Lys	Val
	435						440					445			

Pro Glu Val Lys Leu Pro Lys Val Pro Glu Ala Ala Ile Pro Asp Val  
 450 455 460

Gln Leu Pro Glu Val Gln Leu Pro Lys Met Ser Asp Met Lys Leu Pro  
 465 470 475 480

Lys Ile Pro Glu Met Val Val Pro Asp Val Arg Leu Pro Glu Val Gln  
 485 490 495

Leu Pro Lys Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys  
 500 505 510

Trp Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Val Gln Leu  
 515 520 525

Pro Lys Val Pro Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val  
 530 535 540

Pro Asp Val His Leu Pro Asp Val Gln Leu Pro Lys Val Pro Glu Met  
 545 550 555 560

Lys Leu Pro Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val Pro  
 565 570 575

Asp Val Arg Leu Pro Glu Val Gln Leu Pro Lys Val Ser Glu Val Lys  
 580 585 590

Leu Pro Lys Met Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu  
 595 600 605

Leu Gln Leu Pro Lys Met Ser Glu Val Lys Leu Pro Lys Met Pro Glu  
 610 615 620

Met Ala Val Pro Asp Val Arg Leu Pro Glu Val Gln Leu Pro Lys Val  
 625 630 635 640

Ser Glu Met Lys Leu Pro Lys Met Pro Glu Met Thr Met Pro Asp Ile  
 645 650 655

Arg Leu Pro Glu Val Gln Leu Pro Lys Val Pro Asp Ile Lys Leu Pro  
 660 665 670

Glu Met Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Asp Met Ala  
 675 680 685

Val Pro Asp Val Pro Leu Pro Glu Leu Gln Leu Pro Lys Val Ser Asp  
690 695 700  
Ile Arg Leu Pro Glu Met Gln Val Ser Gln Val Pro Glu Val Gln Leu  
705 710 715 720  
Pro Lys Met Pro Glu Met Lys Leu Ser Lys Val Pro Glu Val Gln Arg  
725 730 735  
Lys Ser Ala Gly Ala Glu Gln Ala Lys Gly Thr Glu Phe Ser Phe Lys  
740 745 750  
Leu Pro Lys Met Thr Met Pro Lys Leu Gly Lys Val Gly Lys Pro Gly  
755 760 765  
Glu Ala Ser Ile Glu Val Pro Asp Lys Leu Met Thr Leu Pro Cys Leu  
770 775 780  
Gln Pro Glu Val Gly Thr Glu Ala Ser His Val Gly Val Pro Ser Leu  
785 790 795 800  
Ser Leu Pro Ser Val Glu Leu Asp Leu Pro Gly Ala Leu Gly Leu Glu  
805 810 815  
Gly Gln Val Gln Glu Ala Val Pro Gly Lys Val Glu Lys Pro Glu Gly  
820 825 830  
Pro Arg Val Ala Val Gly Val Gly Glu Val Gly Phe Arg Val Pro Ser  
835 840 845  
Val Glu Ile Val Thr Pro Gln Leu Pro Thr Val Glu Val Glu Lys Glu  
850 855 860  
Gln Leu Glu Met Val Glu Met Lys Val Lys Pro Ser Ser Lys Phe Ser  
865 870 875 880  
Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys Ala Val Lys Gly Glu Val  
885 890 895  
Glu Gly Pro Gly Arg Ala Thr Lys Leu Lys Val Ser Lys Phe Thr Ile  
900 905 910  
Ser Leu Pro Lys Ala Arg Ala Gly Thr Glu Ala Glu Ala Lys Gly Ala  
915 920 925

Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp Leu Ser Ile Pro Gln Leu  
 930 935 940

Ser Leu Asp Ala Gln Leu Pro Ser Gly Lys Val Glu Val Ala Asp Ser  
 945 950 955 960

Lys Pro Lys Ser Ser Arg Phe Ala Leu Pro Lys Phe Gly Val Lys Gly  
 965 970 975

Arg Asp Ser Glu Ala Asp Val Leu Val Ala Gly Glu Ala Glu Leu Glu  
 980 985 990

Gly Lys Gly Trp Gly Trp Asp Gly Lys Val Lys Met Pro Lys Leu Lys  
 995 1000 1005

Met Pro Ser Phe Gly Leu Ser Arg Gly Lys Glu Ala Glu Thr Gln  
 1010 1015 1020

Asp Gly Arg Val Ser Pro Gly Glu Lys Leu Glu Ala Ile Ala Gly  
 1025 1030 1035

Gln Leu Lys Ile Pro Ala Val Glu Leu Val Thr Pro Gly Ala Gln  
 1040 1045 1050

Glu Thr Glu Lys Val Thr Ser Gly Val Lys Pro Ser Gly Leu Gln  
 1055 1060 1065

Val Ser Thr Thr Gly Gln Val Val Ala Glu Gly Gln Glu Ser Val  
 1070 1075 1080

Gln Arg Val Ser Thr Leu Gly Ile Ser Leu Pro Gln Val Glu Leu  
 1085 1090 1095

Ala Ser Phe Gly Glu Ala Gly Pro Glu Ile Val Ala Pro Ser Ala  
 1100 1105 1110

Glu Gly Thr Ala Gly Ser Arg Val Gln Val Pro Gln Val Met Leu  
 1115 1120 1125

Glu Leu Pro Gly Thr Gln Val Ala Gly Gly Asp Leu Leu Val Gly  
 1130 1135 1140

Glu Gly Ile Phe Lys Met Pro Thr Val Thr Val Pro Gln Leu Glu  
 1145 1150 1155

Leu Asp Val Gly Leu Gly His Glu Ala Gln Ala Gly Glu Ala Ala

1160		1165		1170
Lys Ser Glu Gly Gly Ile	Lys Leu Lys Leu Pro	Thr Leu Gly Thr		
1175	1180	1185		
Gly Ser Arg Gly Glu Gly	Val Glu Pro Gln Gly	Pro Glu Ala Gln		
1190	1195	1200		
Arg Thr Phe His Leu Ser	Leu Pro Asp Val Glu	Leu Thr Ser Pro		
1205	1210	1215		
Val Ser Ser His Ala Glu	Tyr Gln Val Val Glu	Gly Asp Gly Asp		
1220	1225	1230		
Gly Gly His Lys Leu Lys	Val Arg Leu Pro Leu	Phe Gly Leu Ala		
1235	1240	1245		
Lys Ala Lys Glu Gly Ile	Glu Val Gly Glu Lys	Val Lys Ser Pro		
1250	1255	1260		
Lys Leu Arg Leu Pro Arg	Val Gly Phe Ser Gln	Ser Glu Ser Val		
1265	1270	1275		
Ser Gly Glu Gly Ser Pro	Ser Pro Glu Glu Glu	Glu Glu Gly Ser		
1280	1285	1290		
Gly Glu Gly Ala Ser Ser	Arg Arg Gly Arg Val	Arg Val Arg Leu		
1295	1300	1305		
Pro Arg Val Gly Leu Ala	Ser Pro Ser Lys Val	Ser Lys Gly Gln		
1310	1315	1320		
Glu Gly Asp Ala Thr Ser	Lys Ser Pro Val Gly	Glu Lys Ser Pro		
1325	1330	1335		
Lys Phe Arg Phe Pro Arg	Val Ser Leu Ser Pro	Lys Ala Arg Ser		
1340	1345	1350		
Gly Ser Arg Asp Arg Glu	Glu Gly Gly Phe Arg	Val Arg Leu Pro		
1355	1360	1365		
Ser Val Gly Phe Ser Glu	Thr Ala Val Pro Gly	Ser Thr Arg Ile		
1370	1375	1380		
Glu Gly Thr Gln Ala Ala	Ala Ile			
1385	1390			

<210> 86  
 <211> 1383  
 <212> PRT  
 <213> Rat

<400> 86

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
 1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
 20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
 35 40 45

Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
 50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
 65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
 85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
 100 105 110

Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn  
 115 120 125

Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Ile Gly Thr  
 130 135 140

Leu Gly Thr Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe  
 145 150 155 160

Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Asp Ala Val Lys  
 165 170 175

Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg  
 180 185 190

Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Val Ala Arg Met Ala  
 195 200 205

Ala Ala Ala Pro Pro Ser Arg Lys Ala Lys Ser Glu Ala Glu Val Ala  
 210 215 220  
 Thr Gly Ala Gly Phe Thr Ala Pro Gln Ile Glu Leu Val Gly Pro Arg  
 225 230 235 240  
 Leu Pro Ser Ala Glu Val Gly Val Pro Lys Val Ser Val Pro Lys Gly  
 245 250 255  
 Thr Pro Ser Thr Glu Ala Ala Ser Gly Phe Ala Leu His Leu Pro Thr  
 260 265 270  
 Leu Gly Leu Gly Ala Pro Ala Ala Pro Ala Val Glu Pro Pro Thr Thr  
 275 280 285  
 Gly Ile Gln Val Pro Gln Val Glu Leu Pro Thr Leu Pro Ser Leu Pro  
 290 295 300  
 Thr Leu Pro Thr Leu Pro Cys Leu Asp Thr Gln Glu Gly Ala Ala Val  
 305 310 315 320  
 Val Lys Val Pro Thr Leu Asp Val Ala Ala Pro Ser Val Glu Val Asp  
 325 330 335  
 Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Gln Gly Glu Val Pro Glu  
 340 345 350  
 Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Val Arg  
 355 360 365  
 Gly Lys Glu Ala Thr Glu Ala Lys Val Val Lys Gly Ser Pro Glu Ala  
 370 375 380  
 Lys Ala Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu  
 385 390 395 400  
 Leu Glu Ser Arg Pro Ser Gly Pro Glu Val Ala Ala Glu Ser Lys Leu  
 405 410 415  
 Lys Leu Pro Thr Leu Lys Met Pro Ser Phe Gly Ile Ser Val Ala Gly  
 420 425 430  
 Pro Glu Val Lys Ala Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Val  
 435 440 445  
 Pro Glu Ile Lys Leu Pro Lys Ala Pro Glu Ala Ala Ile Pro Asp Val



450		455		460
Gln Leu Pro Glu Val	Gln Leu Pro Lys Met Ser Asp Met Lys Leu Pro			
465	470	475		480
Lys Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Lys				
485	490			495
Leu Pro Lys Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys				
500	505			510
Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu				
515	520		525	
Pro Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val				
530	535		540	
Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu Pro				
545	550		555	560
Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val Pro				
565	570			575
Glu Met Ala Val Pro Asp Val Arg Ile Pro Glu Val Gln Leu Pro Lys				
580	585			590
Val Ser Glu Val Lys Leu Pro Lys Ile Pro Asp Met Ala Val Pro Asp				
595	600		605	
Val Arg Leu Pro Glu Leu Gln Leu Pro Lys Met Ser Glu Val Lys Leu				
610	615		620	
Pro Lys Ile Pro Asp Met Ala Val Pro Asp Val Arg Leu Pro Glu Val				
625	630		635	640
Gln Leu Pro Lys Val Ser Glu Leu Lys Leu Pro Lys Val Pro Glu Met				
645	650			655
Thr Met Pro Asp Ile Arg Leu Pro Glu Val Gln Leu Pro Lys Val Pro				
660	665			670
Asp Ile Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala				
675	680		685	
Val Pro Asp Val Pro Leu Pro Glu Leu Gln Leu Pro Lys Val Pro Gln				
690	695		700	

Val Pro Asp Val His Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys  
705 710 715 720

Val Pro Glu Ala Gln Arg Lys Ser Ala Gly Ala Glu Gln Ala Glu Lys  
725 730 735

Thr Glu Phe Ser Phe Lys Leu Pro Lys Met Thr Val Pro Lys Leu Gly  
740 745 750

Lys Val Thr Lys Pro Gly Glu Ala Gly Ile Glu Val Pro Asp Lys Leu  
755 760 765

Leu Ile Leu Pro Cys Leu Gln Pro Glu Val Gly Thr Glu Val Ala Arg  
770 775 780

Val Gly Val Pro Ser Leu Ser Leu Pro Ser Val Glu Leu Asp Leu Pro  
785 790 795 800

Gly Ala Leu Gly Leu Glu Gly Gln Val Gln Glu Ala Val Ser Gly Lys  
805 810 815

Val Glu Lys Pro Glu Gly Pro Arg Val Ala Val Gly Thr Gly Glu Ala  
820 825 830

Gly Phe Arg Val Pro Ser Val Glu Ile Val Asn Pro Gln Leu Pro Thr  
835 840 845

Val Glu Val Lys Lys Glu Gln Leu Glu Met Val Glu Met Lys Val Lys  
850 855 860

Pro Thr Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys  
865 870 875 880

Ala Val Lys Ala Glu Val Glu Gly Pro Gly Arg Ala Thr Lys Leu Lys  
885 890 895

Val Ser Lys Phe Ala Ile Ser Leu Pro Arg Ala Arg Ala Gly Thr Asp  
900 905 910

Ala Asp Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp  
915 920 925

Leu Ser Ile Pro Gln Leu Ser Leu Asp Ala Gln Leu Pro Ser Gly Lys  
930 935 940

Val Glu Val Ala Gly Ala Glu Ser Lys Pro Lys Gly Ser Arg Phe Ala  
 945 950 955 960

Leu Pro Lys Phe Gly Ala Lys Gly Arg Asp Ser Glu Ala Asp Val Leu  
 965 970 975

Val Ala Gly Glu Ala Glu Leu Glu Gly Lys Gly Trp Gly Trp Asp Gly  
 980 985 990

Lys Val Lys Met Pro Lys Leu Lys Met Pro Ser Phe Gly Leu Ser Arg  
 995 1000 1005

Gly Lys Glu Ala Glu Ile Gln Asp Gly Arg Val Ser Pro Gly Glu  
 1010 1015 1020

Lys Leu Glu Ala Ile Ala Gly Gln Leu Lys Ile Pro Glu Val Glu  
 1025 1030 1035

Leu Val Thr Pro Gly Ala Gln Glu Thr Glu Lys Val Thr Ser Gly  
 1040 1045 1050

Val Lys Pro Ser Gly Leu Gln Val Ser Thr Thr Arg Gln Val Val  
 1055 1060 1065

Ala Glu Gly Gln Glu Gly Ala Gln Arg Val Ser Ser Leu Gly Ile  
 1070 1075 1080

Ser Leu Pro Gln Val Glu Leu Ala Ser Phe Gly Glu Ala Gly Pro  
 1085 1090 1095

Glu Ile Ala Ala Pro Ser Ala Glu Gly Thr Val Gly Ser Arg Ile  
 1100 1105 1110

Gln Val Pro Gln Val Met Leu Glu Leu Pro Gly Thr Gln Val Ala  
 1115 1120 1125

Gly Gly Asp Leu Leu Val Gly Glu Gly Ile Phe Lys Met Pro Thr  
 1130 1135 1140

Val Thr Val Pro Gln Leu Glu Leu Asp Val Gly Leu Gly His Glu  
 1145 1150 1155

Ala Gln Ala Gly Glu Thr Ala Lys Ser Glu Gly Gly Leu Lys Leu  
 1160 1165 1170

Lys Leu Pro Thr Leu Gly Ala Gly Gly Lys Gly Glu Gly Ala Glu  
1175 1180 1185

Ala Gln Ser Pro Glu Ala Gln His Thr Phe His Ile Ser Leu Pro  
1190 1195 1200

Asp Val Glu Leu Thr Ser Pro Val Ser Ser His Ala Glu Tyr Gln  
1205 1210 1215

Val Val Glu Gly Asp Gly Asp Gly Gly His Lys Leu Lys Val Arg  
1220 1225 1230

Leu Pro Leu Phe Gly Leu Ala Arg Ala Lys Glu Gly Ile Glu Thr  
1235 1240 1245

Gly Glu Lys Val Lys Ser Pro Lys Leu Arg Leu Pro Arg Val Gly  
1250 1255 1260

Phe Ser Gln Ser Glu Ser Ala Ser Gly Glu Gly Ser Pro Ser Pro  
1265 1270 1275

Glu Glu Glu Glu Glu Gly Ser Gly Glu Gly Ala Ser Gly Arg Arg  
1280 1285 1290

Gly Arg Val Arg Val Arg Leu Pro Arg Val Gly Leu Ala Ser Pro  
1295 1300 1305

Ser Lys Gly Ser Lys Gly Gln Glu Gly Asp Ala Ala Ser Lys Ser  
1310 1315 1320

Pro Val Gly Glu Lys Ser Pro Lys Phe Arg Phe Pro Arg Val Ser  
1325 1330 1335

Leu Ser Pro Lys Ala Arg Ser Gly Ser Lys Asp Arg Glu Glu Gly  
1340 1345 1350

Gly Phe Arg Val Arg Leu Pro Ser Val Gly Phe Ser Glu Thr Ala  
1355 1360 1365

Ala Pro Gly Ser Ala Arg Ile Glu Gly Thr Gln Ala Ala Ala Ile  
1370 1375 1380

<210> 87  
<211> 1383  
<212> PRT  
<213> Rat

<400> 87

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Phe  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Lys Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Met Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn  
115 120 125

Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Ile Gly Thr  
130 135 140

Leu Gly Thr Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe  
145 150 155 160

Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Asp Ala Val Lys  
165 170 175

Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg  
180 185 190

Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Val Ala Arg Met Ala  
195 200 205

Ala Ala Ala Pro Pro Ser Arg Lys Ala Lys Ser Glu Ala Glu Val Ala  
210 215 220

Thr Gly Ala Gly Phe Thr Ala Pro Gln Ile Glu Leu Val Gly Pro Arg  
225 230 235 240

Leu Pro Ser Ala Glu Val Gly Val Pro Lys Val Ser Val Pro Lys Gly  
 245 250 255

Thr Pro Ser Thr Glu Ala Ala Ser Gly Phe Ala Leu His Leu Pro Thr  
 260 265 270

Leu Gly Leu Gly Ala Pro Ala Ala Pro Ala Val Glu Pro Pro Thr Thr  
 275 280 285

Gly Ile Gln Val Pro Gln Val Glu Leu Pro Thr Leu Pro Ser Leu Pro  
 290 295 300

Thr Leu Pro Thr Leu Pro Cys Leu Asp Thr Gln Glu Gly Ala Ala Val  
 305 310 315 320

Val Lys Val Pro Thr Leu Asp Val Ala Ala Pro Ser Val Glu Val Asp  
 325 330 335

Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Gln Gly Glu Val Pro Glu  
 340 345 350

Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Val Arg  
 355 360 365

Gly Lys Glu Ala Thr Glu Ala Lys Val Val Lys Gly Ser Pro Glu Ala  
 370 375 380

Lys Ala Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu  
 385 390 395 400

Leu Glu Ser Arg Pro Ser Gly Pro Glu Val Ala Ala Glu Ser Lys Leu  
 405 410 415

Lys Leu Pro Thr Leu Lys Met Pro Ser Phe Gly Ile Ser Val Ala Gly  
 420 425 430

Pro Glu Val Lys Ala Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Val  
 435 440 445

Pro Glu Ile Lys Leu Pro Lys Ala Pro Glu Ala Ala Ile Pro Asp Val  
 450 455 460

Gln Leu Pro Glu Val Gln Leu Pro Lys Met Ser Asp Met Lys Leu Pro  
 465 470 475 480

Lys Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Lys  
 485 490 495

Leu Pro Lys Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys  
 500 505 510

Ile Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu  
 515 520 525

Pro Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val  
 530 535 540

Pro Glu Met Ala Val Pro Asp Val His Leu Pro Asp Ile Gln Leu Pro  
 545 550 555 560

Lys Val Pro Glu Met Lys Leu Pro Asp Met Lys Leu Pro Lys Val Pro  
 565 570 575

Glu Met Ala Val Pro Asp Val Arg Ile Pro Glu Val Gln Leu Pro Lys  
 580 585 590

Val Ser Glu Val Lys Leu Pro Lys Ile Pro Asp Met Ala Val Pro Asp  
 595 600 605

Val Arg Leu Pro Glu Leu Gln Leu Pro Lys Met Ser Glu Val Lys Leu  
 610 615 620

Pro Lys Ile Pro Asp Met Ala Val Pro Asp Val Arg Leu Pro Glu Val  
 625 630 635 640

Gln Leu Pro Lys Val Ser Glu Leu Lys Leu Pro Lys Val Pro Glu Met  
 645 650 655

Thr Met Pro Asp Ile Arg Leu Pro Glu Val Gln Leu Pro Lys Val Pro  
 660 665 670

Asp Ile Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala  
 675 680 685

Val Pro Asp Val Pro Leu Pro Glu Leu Gln Leu Pro Lys Val Pro Gln  
 690 695 700

Val Pro Asp Val His Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys  
 705 710 715 720

Val Pro Glu Ala Gln Arg Lys Ser Ala Gly Ala Glu Gln Ala Glu Lys

725	730	735
Thr Glu Phe Ser Phe Lys Leu Pro Lys Met Thr Val Pro Lys Leu Gly 740 745 750		
Lys Val Thr Lys Pro Gly Glu Ala Gly Ile Glu Val Pro Asp Lys Leu 755 760 765		
Leu Ile Leu Pro Cys Leu Gln Pro Glu Val Gly Thr Glu Val Ala Arg 770 775 780		
Val Gly Val Pro Ser Leu Ser Leu Pro Ser Val Glu Leu Asp Leu Pro 785 790 795 800		
Gly Ala Leu Gly Leu Glu Gly Gln Val Gln Glu Ala Val Ser Gly Lys 805 810 815		
Val Glu Lys Pro Glu Gly Pro Arg Val Ala Val Gly Thr Gly Glu Ala 820 825 830		
Gly Phe Arg Val Pro Ser Val Glu Ile Val Asn Pro Gln Leu Pro Thr 835 840 845		
Val Glu Val Lys Lys Glu Gln Leu Glu Met Val Glu Met Lys Val Lys 850 855 860		
Pro Thr Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys 865 870 875 880		
Ala Val Lys Ala Glu Val Glu Gly Pro Gly Arg Ala Thr Lys Leu Lys 885 890 895		
Val Ser Lys Phe Ala Ile Ser Leu Pro Arg Ala Arg Ala Gly Thr Asp 900 905 910		
Ala Asp Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp 915 920 925		
Leu Ser Ile Pro Gln Leu Ser Leu Asp Ala Gln Leu Pro Ser Gly Lys 930 935 940		
Val Glu Val Ala Gly Ala Glu Ser Lys Pro Lys Gly Ser Arg Phe Ala 945 950 955 960		
Leu Pro Lys Phe Gly Ala Lys Gly Arg Asp Ser Glu Ala Asp Val Leu 965 970 975		



Val Ala Gly Glu Ala Glu Leu Glu Gly Lys Gly Trp Gly Trp Asp Gly  
980 985 990

Lys Val Lys Met Pro Lys Leu Lys Met Pro Ser Phe Gly Leu Ser Arg  
995 1000 1005

Gly Lys Glu Ala Glu Ile Gln Asp Gly Arg Val Ser Pro Gly Glu  
1010 1015 1020

Lys Leu Glu Ala Ile Ala Gly Gln Leu Lys Ile Pro Glu Val Glu  
1025 1030 1035

Leu Val Thr Pro Gly Ala Gln Glu Thr Glu Lys Val Thr Ser Gly  
1040 1045 1050

Val Lys Pro Ser Gly Leu Gln Val Ser Thr Thr Arg Gln Val Val  
1055 1060 1065

Ala Glu Gly Gln Glu Gly Ala Gln Arg Val Ser Ser Leu Gly Ile  
1070 1075 1080

Ser Leu Pro Gln Val Glu Leu Ala Ser Phe Gly Glu Ala Gly Pro  
1085 1090 1095

Glu Ile Ala Ala Pro Ser Ala Glu Gly Thr Val Gly Ser Arg Ile  
1100 1105 1110

Gln Val Pro Gln Val Met Leu Glu Leu Pro Gly Thr Gln Val Ala  
1115 1120 1125

Gly Gly Asp Leu Leu Val Gly Glu Gly Ile Phe Lys Met Pro Thr  
1130 1135 1140

Val Thr Val Pro Gln Leu Glu Leu Asp Val Gly Leu Gly His Glu  
1145 1150 1155

Ala Gln Ala Gly Glu Thr Ala Lys Ser Glu Gly Gly Leu Lys Leu  
1160 1165 1170

Lys Leu Pro Thr Leu Gly Ala Gly Gly Lys Gly Glu Gly Ala Glu  
1175 1180 1185

Ala Gln Ser Pro Glu Ala Gln His Thr Phe His Ile Ser Leu Pro  
1190 1195 1200

Asp Val Glu Leu Thr Ser Pro Val Ser Ser His Ala Glu Tyr Gln  
 1205 1210 1215

Val Val Glu Gly Asp Gly Asp Gly Gly His Lys Leu Lys Val Arg  
 1220 1225 1230

Leu Pro Leu Phe Gly Leu Ala Arg Ala Lys Glu Gly Ile Glu Thr  
 1235 1240 1245

Gly Glu Lys Val Lys Ser Pro Lys Leu Arg Leu Pro Arg Val Gly  
 1250 1255 1260

Phe Ser Gln Ser Glu Ser Ala Ser Gly Glu Gly Ser Pro Ser Pro  
 1265 1270 1275

Glu Glu Glu Glu Glu Gly Ser Gly Glu Gly Ala Ser Gly Arg Arg  
 1280 1285 1290

Gly Arg Val Arg Val Arg Leu Pro Arg Val Gly Leu Ala Ser Pro  
 1295 1300 1305

Ser Lys Gly Ser Lys Gly Gln Glu Gly Asp Ala Ala Ser Lys Ser  
 1310 1315 1320

Pro Val Gly Glu Lys Ser Pro Lys Phe Arg Phe Pro Arg Val Ser  
 1325 1330 1335

Leu Ser Pro Lys Ala Arg Ser Gly Ser Lys Asp Arg Glu Glu Gly  
 1340 1345 1350

Gly Phe Arg Val Arg Leu Pro Ser Val Gly Phe Ser Glu Thr Ala  
 1355 1360 1365

Ala Pro Gly Ser Ala Arg Ile Glu Gly Thr Gln Ala Ala Ala Ile  
 1370 1375 1380

<210> 88  
 <211> 1461  
 <212> PRT  
 <213> Human

<400> 88

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
 1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Ile

20	25	30
Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg 35 40 45		
Glu Asp Ser Pro Ala Ala Arg Ser Leu Ser Leu Gln Glu Gly Asp Gln 50 55 60		
Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala 65 70 75 80		
Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu 85 90 95		
Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val 100 105 110		
Ser Gly Tyr Glu Ile Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn 115 120 125		
Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Pro Gly Ala 130 135 140		
Leu Gly Val Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe 145 150 155 160		
Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Glu Ala Val Lys 165 170 175		
Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg 180 185 190		
Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Ala Ala Arg Leu Ala 195 200 205		
Ala Ala Ala Pro Pro Pro Arg Lys Ala Lys Val Glu Ala Glu Val Ala 210 215 220		
Ala Gly Ala Arg Phe Thr Ala Pro Gln Val Glu Leu Val Gly Pro Arg 225 230 235 240		
Leu Pro Gly Ala Glu Val Gly Val Pro Gln Val Ser Ala Pro Lys Ala 245 250 255		
Ala Pro Ser Ala Glu Ala Ala Gly Gly Phe Ala Leu His Leu Pro Thr 260 265 270		

Leu Gly Leu Gly Ala Pro Ala Pro Pro Ala Val Glu Ala Pro Ala Val  
275 280 285

Gly Ile Gln Val Pro Gln Val Glu Leu Pro Ala Leu Pro Ser Leu Pro  
290 295 300

Thr Leu Pro Thr Leu Pro Cys Leu Glu Thr Arg Glu Gly Ala Val Ser  
305 310 315 320

Val Val Val Pro Thr Leu Asp Val Ala Ala Pro Thr Val Gly Val Asp  
325 330 335

Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Arg Gly Glu Ala Pro Glu  
340 345 350

Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Ala Arg  
355 360 365

Ala Lys Glu Val Ala Glu Ala Lys Val Ala Lys Val Ser Pro Glu Ala  
370 375 380

Arg Val Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu  
385 390 395 400

Leu Glu Pro Arg Pro Ala Ala Pro Glu Val Val Glu Ser Lys Leu Lys  
405 410 415

Leu Pro Thr Ile Lys Met Pro Ser Leu Gly Ile Gly Val Ser Gly Pro  
420 425 430

Glu Val Lys Val Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Ala Pro  
435 440 445

Glu Val Lys Leu Pro Lys Val Pro Glu Ala Ala Leu Pro Glu Val Arg  
450 455 460

Leu Pro Glu Val Glu Leu Pro Lys Val Ser Glu Met Lys Leu Pro Lys  
465 470 475 480

Val Pro Glu Met Ala Val Pro Glu Val Arg Leu Pro Glu Val Glu Leu  
485 490 495

Pro Lys Val Ser Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val  
500 505 510

Pro Glu Val Arg Leu Pro Glu Val Gln Leu Leu Lys Val Ser Glu Met  
515 520 525

Lys Leu Pro Lys Val Pro Glu Met Ala Val Pro Glu Val Arg Leu Pro  
530 535 540

Glu Val Gln Leu Pro Lys Val Ser Glu Met Lys Leu Pro Glu Val Ser  
545 550 555 560

Glu Val Ala Val Pro Glu Val Arg Leu Pro Glu Val Gln Leu Pro Lys  
565 570 575

Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys Val Pro Glu  
580 585 590

Met Lys Leu Pro Glu Met Lys Leu Pro Glu Val Gln Leu Pro Lys Val  
595 600 605

Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Gln Leu Pro  
610 615 620

Lys Val Pro Glu Met Lys Leu Pro Glu Met Lys Leu Pro Glu Val Lys  
625 630 635 640

Leu Pro Lys Val Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu  
645 650 655

Val Gln Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys Met Pro Glu  
660 665 670

Met Ala Val Pro Glu Val Arg Leu Pro Glu Val Gln Leu Pro Lys Val  
675 680 685

Ser Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val Pro Asp Val  
690 695 700

His Leu Pro Glu Val Gln Leu Pro Lys Val Cys Glu Met Lys Val Pro  
705 710 715 720

Asp Met Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala  
725 730 735

Val Pro Asp Val His Leu Pro Glu Val Gln Leu Pro Lys Val Ser Glu  
740 745 750

Ile Arg Leu Pro Glu Met Gln Val Pro Lys Val Pro Asp Val His Leu  
 755 760 765  
 Pro Lys Ala Pro Glu Val Lys Leu Pro Arg Ala Pro Glu Val Gln Leu  
 770 775 780  
 Lys Ala Thr Lys Ala Glu Gln Ala Glu Gly Met Glu Phe Gly Phe Lys  
 785 790 795 800  
 Met Pro Lys Met Thr Met Pro Lys Leu Gly Arg Ala Glu Ser Pro Ser  
 805 810 815  
 Arg Gly Lys Pro Gly Glu Ala Gly Ala Glu Val Ser Gly Lys Leu Val  
 820 825 830  
 Thr Leu Pro Cys Leu Gln Pro Glu Val Asp Gly Glu Ala His Val Gly  
 835 840 845  
 Val Pro Ser Leu Thr Leu Pro Ser Val Glu Leu Asp Leu Pro Gly Ala  
 850 855 860  
 Leu Gly Leu Gln Gly Gln Val Pro Ala Ala Lys Met Gly Lys Gly Glu  
 865 870 875 880  
 Arg Val Glu Gly Pro Glu Val Ala Ala Gly Val Arg Glu Val Gly Phe  
 885 890 895  
 Arg Val Pro Ser Val Glu Ile Val Thr Pro Gln Leu Pro Ala Val Glu  
 900 905 910  
 Ile Glu Glu Gly Arg Leu Glu Met Ile Glu Thr Lys Val Lys Pro Ser  
 915 920 925  
 Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys Val Ala  
 930 935 940  
 Lys Ala Glu Ala Glu Gly Ala Gly Arg Ala Thr Lys Leu Lys Val Ser  
 945 950 955 960  
 Lys Phe Ala Ile Ser Leu Pro Lys Ala Arg Val Gly Ala Glu Ala Glu  
 965 970 975  
 Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp Leu Ser  
 980 985 990  
 Ile Pro Gln Leu Ser Leu Asp Ala His Leu Pro Ser Gly Lys Val Glu

995	1000	1005
Val Ala Gly Ala Asp Leu 1010	Lys Phe Lys Gly Pro 1015	Arg Phe Ala Leu 1020
Pro Lys Phe Gly Val Arg 1025	Gly Arg Asp Thr Glu 1030	Ala Ala Glu Leu 1035
Val Pro Gly Val Ala Glu 1040	Leu Glu Gly Lys Gly 1045	Trp Gly Trp Asp 1050
Gly Arg Val Lys Met Pro 1055	Lys Leu Lys Met Pro 1060	Ser Phe Gly Leu 1065
Ala Arg Gly Lys Glu Ala 1070	Glu Val Gln Gly Asp 1075	Arg Ala Ser Pro 1080
Gly Glu Lys Ala Glu Ser 1085	Thr Ala Val Gln Leu 1090	Lys Ile Pro Glu 1095
Val Glu Leu Val Thr Leu 1100	Gly Ala Gln Glu Glu 1105	Gly Arg Ala Glu 1110
Gly Ala Val Ala Val Ser 1115	Gly Met Gln Leu Ser 1120	Gly Leu Lys Val 1125
Ser Thr Ala Arg Gln Val 1130	Val Thr Glu Gly His 1135	Asp Ala Gly Leu 1140
Arg Met Pro Pro Leu Gly 1145	Ile Ser Leu Pro Gln 1150	Val Glu Leu Thr 1155
Gly Phe Gly Glu Ala Gly 1160	Thr Pro Gly Gln Gln 1165	Ala Gln Ser Thr 1170
Val Pro Ser Ala Glu Gly 1175	Thr Ala Gly Tyr Arg 1180	Val Gln Val Pro 1185
Gln Val Thr Leu Ser Leu 1190	Pro Gly Ala Gln Val 1195	Ala Gly Gly Glu 1200
Leu Leu Val Gly Glu Gly 1205	Val Phe Lys Met Pro 1210	Thr Val Thr Val 1215
Pro Gln Leu Glu Leu Asp 1220	Val Gly Leu Ser Arg 1225	Glu Ala Gln Ala 1230

Gly	Glu	Ala	Ala	Thr	Gly	Glu	Gly	Gly	Leu	Arg	Leu	Lys	Leu	Pro
1235						1240					1245			
Thr	Leu	Gly	Ala	Arg	Ala	Arg	Val	Gly	Gly	Glu	Gly	Ala	Glu	Glu
1250						1255					1260			
Gln	Pro	Pro	Gly	Ala	Glu	Arg	Thr	Phe	Cys	Leu	Ser	Leu	Pro	Asp
1265						1270					1275			
Val	Glu	Leu	Ser	Pro	Ser	Gly	Gly	Asn	His	Ala	Glu	Tyr	Gln	Val
1280						1285					1290			
Ala	Glu	Gly	Glu	Gly	Glu	Ala	Gly	His	Lys	Leu	Lys	Val	Arg	Leu
1295						1300					1305			
Pro	Arg	Phe	Gly	Leu	Val	Arg	Ala	Lys	Glu	Gly	Ala	Glu	Glu	Gly
1310						1315					1320			
Glu	Lys	Ala	Lys	Ser	Pro	Lys	Leu	Arg	Leu	Pro	Arg	Val	Gly	Phe
1325						1330					1335			
Ser	Gln	Ser	Glu	Met	Val	Thr	Gly	Glu	Gly	Ser	Pro	Ser	Pro	Glu
1340						1345					1350			
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gly	Ser	Gly	Glu	Gly	Ala	Ser
1355						1360					1365			
Gly	Arg	Arg	Gly	Arg	Val	Arg	Val	Arg	Leu	Pro	Arg	Val	Gly	Leu
1370						1375					1380			
Ala	Ala	Pro	Ser	Lys	Ala	Ser	Arg	Gly	Gln	Glu	Gly	Asp	Ala	Ala
1385						1390					1395			
Pro	Lys	Ser	Pro	Val	Arg	Glu	Lys	Ser	Pro	Lys	Phe	Arg	Phe	Pro
1400						1405					1410			
Arg	Val	Ser	Leu	Ser	Pro	Lys	Ala	Arg	Ser	Gly	Ser	Gly	Asp	Gln
1415						1420					1425			
Glu	Glu	Gly	Gly	Leu	Arg	Val	Arg	Leu	Pro	Ser	Val	Gly	Phe	Ser
1430						1435					1440			
Glu	Thr	Gly	Ala	Pro	Gly	Pro	Ala	Arg	Met	Glu	Gly	Ala	Gln	Ala
1445						1450					1455			



Ala Ala Val  
1460

<210> 89  
<211> 147  
<212> PRT  
<213> Human

<400> 89

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Ile  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Arg Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Ile Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Val  
115 120 125

Arg Val Leu Ser Pro Ala Pro Ala Leu Asp Cys Pro Ser Asp Pro Val  
130 135 140

Ser Ala Pro  
145

<210> 90  
<211> 370  
<212> PRT  
<213> Arabidopsisthaliana

<400> 90

Met Ala Leu Met Lys Lys Ser Leu Ser Ala Ala Leu Leu Ser Ser Pro  
1 5 10 15

Leu Leu Ile Ile Cys Leu Ile Ala Leu Leu Ala Asp Pro Phe Ser Val  
 20 25 30

Gly Ala Arg Arg Leu Leu Glu Asp Pro Lys Pro Glu Ile Pro Lys Leu  
 35 40 45

Pro Glu Leu Pro Lys Phe Glu Val Pro Lys Leu Pro Glu Phe Pro Lys  
 50 55 60

Pro Glu Leu Pro Lys Leu Pro Glu Phe Pro Lys Pro Glu Leu Pro Lys  
 65 70 75 80

Ile Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Pro  
 85 90 95

Lys Pro Glu Glu Thr Lys Leu Pro Asp Ile Pro Lys Leu Glu Leu Pro  
 100 105 110

Lys Phe Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Met Pro Glu Ile  
 115 120 125

Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu  
 130 135 140

Pro Lys Met Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Phe Pro Glu  
 145 150 155 160

Ile Pro Lys Pro Asp Leu Pro Lys Phe Pro Glu Asn Ser Lys Pro Glu  
 165 170 175

Val Pro Lys Leu Met Glu Thr Glu Lys Pro Glu Ala Pro Lys Val Pro  
 180 185 190

Glu Ile Pro Lys Pro Glu Leu Pro Lys Leu Pro Glu Val Pro Lys Leu  
 195 200 205

Glu Ala Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys Met  
 210 215 220

Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys  
 225 230 235 240

Leu Pro Glu Val Pro Lys Leu Glu Ala Pro Lys Val Pro Glu Ile Gln  
 245 250 255

Lys Pro Glu Leu Pro Lys Met Pro Glu Leu Pro Lys Met Pro Glu Ile  
 260 265 270

Gln Lys Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu  
 275 280 285

Pro Lys Val Pro Glu Val Pro Lys Pro Glu Leu Pro Thr Val Pro Glu  
 290 295 300

Val Pro Lys Ser Glu Ala Pro Lys Phe Pro Glu Ile Pro Lys Pro Glu  
 305 310 315 320

Leu Pro Lys Ile Pro Glu Val Pro Lys Pro Glu Leu Pro Lys Val Pro  
 325 330 335

Glu Ile Thr Lys Pro Ala Val Pro Glu Ile Pro Lys Pro Glu Leu Pro  
 340 345 350

Thr Met Pro Gln Leu Pro Lys Leu Pro Glu Phe Pro Lys Val Pro Gly  
 355 360 365

Thr Pro  
 370

<210> 91  
 <211> 370  
 <212> PRT  
 <213> Arabidopsisthaliana

<400> 91

Met Ala Leu Met Lys Lys Ser Leu Ser Ala Ala Leu Leu Ser Ser Pro  
 1 5 10 15

Leu Leu Ile Ile Cys Leu Ile Ala Leu Leu Ala Asp Pro Phe Ser Val  
 20 25 30

Gly Ala Arg Arg Leu Leu Glu Asp Pro Lys Pro Glu Ile Pro Lys Leu  
 35 40 45

Pro Glu Leu Pro Lys Phe Glu Val Pro Lys Leu Pro Glu Phe Pro Lys  
 50 55 60

Pro Glu Leu Pro Lys Leu Pro Glu Phe Pro Lys Pro Glu Leu Pro Lys  
 65 70 75 80

Ile Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Pro

85

90

95

Lys Pro Glu Glu Thr Lys Leu Pro Asp Ile Pro Lys Leu Glu Leu Pro  
 100 105 110

Lys Phe Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Met Pro Glu Ile  
 115 120 125

Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu  
 130 135 140

Pro Lys Met Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Phe Pro Glu  
 145 150 155 160

Ile Pro Lys Pro Asp Leu Pro Lys Phe Pro Glu Asn Ser Lys Ser Glu  
 165 170 175

Val Pro Lys Leu Met Glu Thr Glu Lys Pro Glu Ala Pro Lys Val Pro  
 180 185 190

Glu Ile Pro Lys Pro Glu Leu Pro Lys Leu Pro Glu Val Pro Lys Leu  
 195 200 205

Glu Ala Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys Met  
 210 215 220

Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys  
 225 230 235 240

Leu Pro Glu Val Pro Lys Leu Glu Ala Pro Lys Val Pro Glu Ile Gln  
 245 250 255

Lys Pro Glu Leu Pro Lys Met Pro Glu Leu Pro Lys Met Pro Glu Ile  
 260 265 270

Gln Lys Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu  
 275 280 285

Pro Lys Val Pro Glu Val Pro Lys Pro Glu Leu Pro Thr Val Pro Glu  
 290 295 300

Val Pro Lys Ser Glu Ala Pro Lys Phe Pro Glu Ile Pro Lys Pro Glu  
 305 310 315 320

Leu Pro Lys Ile Pro Glu Val Pro Lys Pro Glu Leu Pro Lys Val Pro  
 325 330 335

Glu Ile Thr Lys Pro Ala Val Pro Glu Ile Pro Lys Pro Glu Leu Pro  
340 345 350

Thr Met Pro Gln Leu Pro Lys Leu Pro Glu Phe Pro Lys Val Pro Gly  
355 360 365

Thr Pro  
370

<210> 92  
<211> 147  
<212> PRT  
<213> Human

<400> 92

Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu  
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Ile  
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg  
35 40 45

Glu Asp Ser Pro Ala Ala Arg Ser Leu Ser Leu Gln Glu Gly Asp Gln  
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala  
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu  
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val  
100 105 110

Ser Gly Tyr Glu Ile Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Val  
115 120 125

Arg Val Leu Ser Pro Ala Pro Ala Leu Asp Cys Pro Ser Asp Pro Val  
130 135 140

Ser Ala Pro  
145

<210> 93  
 <211> 214  
 <212> PRT  
 <213> Human

<400> 93

Met Glu Leu Leu Gly Glu Gly Ala Ile Leu Gln Gly Arg Arg Glu Ser  
 1 5 10 15

Gln Met Glu Ala Ala Pro Gly Ile Gln Thr Cys Gly His Ser Ala Glu  
 20 25 30

Leu Pro Ser Gln Gly Met Gly Arg Thr Arg Ala Glu Arg Ala Thr Ser  
 35 40 45

Pro Val Arg Pro Ser Ile Thr Trp Lys Ile Gly Ser Pro Lys Val Asp  
 50 55 60

Gly Arg His Thr Pro Met Pro Phe Pro Ser Val Ser Thr Gly Glu Gly  
 65 70 75 80

Lys Ser Thr Leu Trp Ile Leu Tyr Leu His Cys Phe Gly Ser Arg Lys  
 85 90 95

Ser Pro Asp Phe Ser Thr Pro Pro Arg Glu Pro Lys Ser Gln Gly Met  
 100 105 110

Leu Lys Glu Gln Ala Arg Lys Met Arg Gly Gln Arg Gly Gly Arg Glu  
 115 120 125

Gly Ala Lys Gly Thr Leu Lys Thr Gln Arg Pro Pro Ser Lys Asp Gln  
 130 135 140

Ala Pro Leu Ala His Gly Pro Arg Glu Lys Gln Val Pro Ala Asp Glu  
 145 150 155 160

Ser Phe Leu Gln Lys Pro Arg Leu Pro Asp Leu Val Lys Gln Gln Pro  
 165 170 175

Asn Arg Ser Leu Ser Thr Asn Val Arg Gly Ala Glu Pro Ser Pro Ser  
 180 185 190

Leu Ala Thr Glu Leu Val Leu Lys Lys Leu Val Pro Ala Ser Thr Cys  
 195 200 205

Gln Glu Leu Pro Lys Thr  
 210